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Full translation of manual, printed in Korean, titled "Principles of Combat Training," published by the Military Publication Department the National Defense Ministry, NKDR, dated 1954. 412 pp.

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Requested by ACSI, DA

*Note: Symbol * indicates transliteration of words for which correct spelling in English cannot be determined.*

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Missions of Training and General Instructions on Methods

A. Basic Missions

1. The following will be the basis of combat training:

a. Complete execution of combat by the KUBUNDAE and their constant combat readiness.

b. Indoctrination of soldiers in the readiness and patriotism to protect their fatherland, in racial and military pride and in the self-sacrificing loyalty to the Korean Labor Party and to the Korean Democratic People's Republic Government.

c. Constant application in actual troop training, the experiences obtained during the national liberation war, the Soviet military science and military technical achievements.

In the training of soldiers and KUBUNDAE, the following will be observed.

a. To train and indoctrinate a soldier so he will be well disciplined, strong in patience, conversant with the Korean People's Army Regulations, and have thorough mastery of regular drill actions.

b. To train a soldier so that he will be a good marksman, thoroughly familiar with his weapons as well as technical combat equipment, act in a trained manner in combat, and faithfully perform the various demands of the regulations and his commander's orders and instructions.

c. To constantly improve technical knowledge of the enlisted men, non-commissioned officers and officers so that they will be able to handle all kind of arms and technical combat equipment and keep them in perfect operating combat ready condition.

d. To train the KUBUNDAE so that it will be able to carry out the general arms combat.

e. To train the KUBUNDAE so that it will master the firing technique and be able to freely utilize the fire of various types of weapons in combat.

B. Troop Training and Guidance in Indoctrination

2. The commanding officer of an organization will directly guide the combat political training of their KUBUNDAE. Commanding officers at various levels must personally execute the study and training entrusted to them, guarantee high quality of study, constantly supervise the execution of training program, strengthen military discipline in every way, organize the training life and habit of the KUBUNDAE faithfully according to the regulations, and ensure constant combat preparation by demanding stringent requirement of their men within the limit of authority entrusted to each commanding officer by the Korean People's Army Regulations.

Considerable study hours will be allotted to "the platform" and tactics-formation studies which will be conducted directly by the commanders of KUBUNDAE to elevate the sense of responsibility in the tactical maneuvers in company commanders, platoon leaders and squad leaders (artillery squad leaders) so that they will complete preparation of their KUBUNDAE.

The duties of various level commanding officers connected with the organization of combat training and their responsibilities for the training and indoctrinating troops are completely described in articles 60-61, 71-72, 75-80, 117-118, 128-129, 134-135, 140-141 of the Administrative Regulations. From the above-mentioned viewpoint, the basic requirements which the Administrative Regulations show to the commanders of KUBUNDAE will be emphasized below.

A company commander is the direct organizer of training of soldiers, platoons and KUBUNDAE.

A company commander will study the guiding methods with non-commissioned officers and their demonstration classes and ensure non-commissioned officers' complete mastery of command and methods. Under his guidance, superior gunners, machine gunners, and mortar crew members are being produced within the company. The company commander will organize the indoctrination program for his company personnel, and carry it out.

A platoon leader will organize the entire study and indoctrination work within his platoon, and personally execute the study for the soldiers on the most important and complicated subjects.

A platoon leader will be his company commander's immediate helper in the execution of the training program for soldiers and KUBUNDAE.

A squad leader will execute the entire study for soldiers, except the study for which a platoon leader is directly responsible, and be responsible for the completion of squad formation movement. A squad leader must know each soldier's degree of preparation and characteristics within his squad. A non-commissioned officer will be the most intimate helper of officers in the training and indoctrination of soldiers. He will be the immediate executioner of all instructions his company commander and platoon leader issue in maintaining a strong internal order and military discipline.

3. Combat training statistics on the all training subjects will be kept as follows:

a. Platoon leader will help statistics on each soldier and squad.

b. Company commander will keep statistics on each squad, platoon and non-commissioned officer.

C. Drafting a Plan

4. A company commander (artillery company commander, independent platoon leader) will draw up combat training plans by the weeks.

5. To facilitate the planning, the contents of training subjects will be described in unit of study hours. Therefore, the following matters will be determined in the training program:

a. Total number of hours per subject.

b. Number of study problems in each lesson in each subject.

The combat training plan depends upon the degree of the training of soldiers and KUBUNDAE, and the degree of perfection in training program and duty sought. So a company commander will be authorized to determine the number of hours required for each lesson and the number of hours required for review.

6. A company commander (artillery company commander) must observe the following when he implements the study schedule.

a. Study the battalion combat training plan, and understand the weekly duties.

b. Consider the company combat training results achieved during the past week for each training subject.

c. Determine the procedure for fulfilling study subjects in accordance with the battalion commander's instruction.

d. Determine the number of hours required for each study and review.

e. Consider the time allotted to a company for the utilization of existing equipment - PAZA* (TN Presumably, "basic equipment") (weapon, equipment for study, training manual, etc) as well as training ground, outdoor studying ground, firing range, etc.

Besides the general study schedule of a company, a company commander will draw the schedules for command study, guiding methods study and demonstrations for non-commissioned officers, and prepares the plans for company indoctrination activity.

7. The combat training plans and study schedules drawn by KUBUNDAE leaders will be subject to the approval of their immediate commanding officers.

At the end of each month, a company commander (artillery company commander) will assemble his entire personnel, evaluate the results achieved by them in combat political training and establish a target for the following month.

The unit commander will establish the procedure for daily routine in accordance with the Internal Security Regulations, Article 198.

D. Training Officers and Noncommissioned Officers in the Teaching Methods

8. Officers and non-commissioned officers teaching methods will be improved through the keeping of constant watch over their completion of assignments and through systematic execution of command of their KUBUNDAE and their immediate training.

9. The study of guiding methods and demonstration must be carried out to ensure excellent study by officers and non-commissioned officers and to ensure uniform training and indoctrination.

10. The study of guiding methods will be usually carried out as follows:

a. Guiding method study for platoon leaders and company commanders (artillery company commanders) will be carried out under the guidance of Battalion Commander (Artillery Commander) two to three hours once a week.

b. Guiding method study for non-commissioned officers will be carried out under the guidance of company commander (artillery company commander) two hours during training hours twice a week.

The objectives of the guiding method study are as follows:

a. Inspection will be carried out to determine the extent officers (non-commissioned officers) can exemplarily acquire the required knowledge and actions pertaining to regulations on the urgent study problems.

b. Show officers (non-commissioned officers) proper organization of the urgent study, how to obtain materials and the easiest methods for carrying out the above-mentioned matters.

Guiding methods and the order of carrying out the study are generally as follows: The leader will inspect actions performed, to determine how well they conform with the necessary articles of the regulations and how well orders are issued and executed. Then, the leader will show his men how the study should be organized, how the study should be supported materially, and how the soldiers or KUBUNDAE should be systematically and properly trained. After that, the leader will train the officers (non-commissioned officers) in the methods of executing the study and in the mastery of training their men.

11. When necessary, demonstration will be presented before entering a new subject. The objective of demonstration is to show officers and non-commissioned officers complete actions on the subject of study they must master to train soldiers and KUBUNDAE.

12. Political lessons are scheduled to be given four hours a week. (The lessons will be given twice, each lasting for two hours.) Besides, political reports will be made three times a week during the training hours on the days when there are no political lessons; each report will last thirty minutes.

13. The non-commissioned officers' preparations for each lesson, which are to be carried out by turns, will be guided by a platoon leader.

14. To make the final report of combat training and to establish later tasks, a company commander will hold discussion meetings with the company officers and with the company non-commissioned officers once or twice a month.

At these meetings, the systems used by officers and non-commissioned officers who have achieved excellent results in combat political training must be demonstrated, and their experiences must be exchanged.

E. General Instructions on Methods

15. In the course of training, the superiority of Stalinistic military science over the bourgeoisie military science, the high tactical combat capacity of the Korean People Army's weapon (tactical combat equipment), and love and care of equipment must be hammered into the students. At the same time, officers, non-commissioned officers, and enlisted men must be instilled with pride in their fatherland and race.

16. The training of enlisted men and KUBUNDAE must be carried out in an orderly manner, beginning with the simple and easy matters and advancing to the complicated and difficult matters.

17. The basic methods of training are as follows. At first, the commanding officer will show the practical and exemplary demonstrations and give brief explanations. Then, a soldier will repeat the action already studied. Then, the commanding officer will pass judgment as to whether the action was correctly executed. After that, he will train the soldiers until they master the action.

18. Individual training will be carried out by a squad personnel (artillery personnel and crew members). At first, the commanding officer will show the action to a group of students. Then, he will show them the action by the numbers. After that, he will call on the students to go through the action by turns. The other squad personnel will correctly carry out the action in accordance with the order of the squad leader (artillery squad leader, crew leader).

19. Theoretical problems must be explained by utilizing objects (sketch maps, charts, MAKKET'U*, placards, movie film for study, etc) so that the soldiers may consciously master the problem of study.

20. Basically, all lessons must be started by checking the knowledge about the items of regulations relating to the subject of study and by briefly reviewing the matters already studied in the previous lesson. It is unwise to proceed to the next subject before the contents of the present subject are digested.

21. The basis of the training of soldiers and KUBUNDAE is the field training. This gives maximum assurance of constant combat readiness of troops. This requirement is not only related to tactics, drill, physical training and firing training but also to the study of technical equipment. The study of technical equipment in the lecture-room must facilitate the assimilation of basic knowledge of the equipment under study. The actual study of technical equipment and the study on methods of skillful utilization will be conducted in the field, artillery range, firing range and at the depot.

Part One. Winter Training Period

Chapter 1. Training Subjects Common to All Special Arms Soldiers

I. Political Training

Political training will be carried out in accordance with the platform of the General Political Bureau of the Korean People's Army.

II. Regulations

A. Purpose of Study

1. To teach soldiers the essence and significance of military discipline.

2. To train soldiers in the following matters.

a. Accurate execution of the matters required by the Regulations Governing Discipline, Administrative Regulations, and the Garrison Duty Regulations.

b. Exemplary execution of the company (artillery company) guard duty and exemplary execution of sentry duty.

B. Instructions on Methods

1. Through knowledge of various regulations of the Korean People's Army soldiers must consciously and correctly carry out their duties, and maintain strict military order and discipline.

Study of the regulations will be conducted by a platoon leader in the following order.

a. First, read the articles of the regulations; explain their contents and significance; and if necessary, give a typical example from the life of an KUBUNDAE or PUDAE.

b. Then, the leader will either ask one or two soldiers to orally repeat the contents of the article or order him (or them) to carry out his (or their) duties (for example, the actions of a sentry, guard, etc.).

c. When one article is thoroughly studied, then the next article will be studied.

d. At the end of the lesson, review problems concerning the contents of the lesson studied are given to soldiers to check the result of studying and to summarize the lesson.

The actual execution of sentry duty will be studied at the guard training ground; the actual execution of the duty of a day duty soldier will be studied in the barracks and at the depot (TN Presumably outdoor training area). In this case, recruits will play the part of sentry and duty soldier and veteran soldiers, the part of head sentry, senior private of the guard, company duty officers and others.

2. The following matters must be learned by heart:

a. Recruits must learn by heart the articles of the regulations relative to the essential points, basis, and duty in military discipline (Regulations Governing Discipline, Artilces 1 - 3), a soldier's duty (Administrative Regulations, Articles 151 - 153), a sentry duty (Garrison Duty Regulations, Articles 165 - 183), and a guard's duty (Administrative Regulations, Articles 273 - 274).

b. Veteran soldiers must learn by heart the articles regulating the duties of the head sentry, senior private of the guard, and company duty officer.

3. The study of such subjects as "Soldier's pay standard and its classification," and "Care and repair of the clothing, combat shoes and equipment" will be carried out on a platoon basis.

When the first of these subjects is studied, the soldiers must be clearly informed of the amount of an enlisted man's pay, the standard ration, and the order of supply under army post conditions and field conditions. During the study, such objects as sketches, placards, charts, etc, will be fully utilized.

In the study of "Care and repair of clothing, army shoes and equipment," soldiers must clearly understand the standard allowances of various supplies and how long these are expected to last. They must also know how to wear army shoes, clothing and equipment, and understand the necessity of careful handling of the above-mentioned articles. To actually demonstrate the methods used in repairing clothing, army shoes and equipment, tailors and cobblers will participate in the study.

Subjects and Allocation of Time

Subject Number	Title	Hours		
		1st Phase		2d Phase
		For the entire KUBUNDAE excluding SF Gun KUBUNDAE	For the SF Gun KUBUNDAE	For the entire KUBUNDAE
	Regulations Governing Discipline			
1	Military Discipline	2	2	2
2	Disciplinary Punishment and reward	6	2	2
3	Appeal and Petition	-	-	2
	Total	8	4	6
	Administrative Regulations			
4	Soldiers and Their Mutual Relationship	4	-	4
5	Allocation of Time and Daily Routine	2	-	-
6	Day and Night Duties and Guard Duties	8	2	2
7	Pay Standard and Soldier's Classification	2	-	-
8	Care and Repair of Clothing, Combat Shoes and Equipment	2	-	-
	Total	18	2	6

	Garrison Duty Regulations			
9	General Rule of Garrison Unit	4	-	-
10	Rights and Responsiblities of Garrison Unit	6	2	2
11	Procedures for Posting Guards	4	-	2
	Total	14	2	4
General total		40	8	16

Note: In the 1st phase, time for the study of the regulations will not be allocated for veteran soldiers.

Regulations Governing Discipline

Subject 1. Military Discipline

Lesson 1. Military discipline, its essence and necessity, soldiers' duty to strengthen military discipline; the commanding officer's order will be law.

Lesson 2. Soldiers' responsibility for the observance and maintenance of discipline and social order.

Regulations Governing Discipline, Articles 1 - 7, 52 - 53, 58 - 59.

Subject 2. Disciplinary Funishment and Reward

Lesson 1. Significance of punishment and reward from the point of indoctrination; punishment for the violation of military discipline and disciplinary punishment which will be applied to soldiers.

Lesson 2. Extent of disciplinary punishment authorized to commanding officers (including up to regimental commanders); the procedure of applying disciplinary punishment and the order of executing disciplinary action.

Lesson 3. Reward applicable to enlisted men and commanding officers authority to give reward.

Regulations Governing Discipline, Articles 8 - 11, 13 - 15, 18 - 20, 23, 26 - 32, 60 - 73, 75 - 78.

Subject 3. Appeal and Petition

Procedures for submitting an appeal and petition either in writing or orally. Procedures for examining appeals and petitions. Soldiers' responsibilities for the presentation of false appeals and petitions.

Regulations Governing Discipline, Articles 96 - 105, 107 and 108.

Administrative Regulations

Subject 4. Soldiers and Their Mutual Relationship

Lesson 1. Soldiers' general duty, observance of the soldiers' oath, soldiers' duty as well as promotion in grade of the soldiers whose knowledge of their duty is complete and whose behavior is excellent.

Lesson 2. Military titles, indication of arm, commanding officers and their men as well as seniors and juniors.

Lesson 3. The receiving of orders, procedure of its execution and etiquette.

Lesson 4. Soldiers' courtesy and behavior.

Administrative Regulations, Articles 1 - 29, 37 - 43, 151 - 153.

Subject 5. Allocation of Time and Daily Routine

The PUDAE's daily routine, reveille, morning inspection, evening inspection, lesson, meals, leave from the disposition area of the PUDAE and interview.

Administrative Regulations, Articles 198 - 225.

Subject 6. Day and Night Duties and Guard Duties

Lesson 1. Day and night duties, personnel in charge of the above-mentioned duties, their mission, chain of command, day and night duties, and the general duties of the soldiers on duty.

Lesson 2. Duties of the company (artillery company, depot) personnel on duty.

Administrative Regulations, Articles 226, 228 - 231, 250 - 252, 273 - 275, 318 - 319, 331 - 332.

Subject 7. Soldiers' Pay Standard and Its Classification

Standard ration and supply under barracks and field conditions, field ration and pay.

Subject 8. Care and Repair of Clothing, Combat Shoes and Equipment

Clothing and equipment appropriate to soldiers, expected life of clothing and equipment, and the care and repair of clothing, combat shoes and equipment.

Garrison Duty Regulations

Subject 9. General Rule of Garrison Unit

Lesson 1. The execution of of the garrison duty is the execution of combat duties. Mission of the guard unit, garrison guard and internal guard, permanent guard and temporary guard. Guard unit personnel. Armament and chain of command. The internal order of guard unit.

Lesson 2. Sentry post, sentry guard and escort. The number of live ammunition loaded in a weapon and reserve live ammunition kept at the guardhouse.

Garrison Duty Regulations, Articles 59 - 69, 73 - 82, 242 - 252.

Subject 10. Rights and Responsibilities of Garrison Unit

Lesson 1. "Inviolability of a sentry." A sentry's duties. Circumstances under which a sentry use his weapon.

Lesson 2. A sentry's special duties and the duties of a lookout and messenger. Veteran soldiers will be taught the duties of a head sentry, independent sentry, and chief and corporal of the guard.

Garrison Duty Regulations, Articles 63 - 64, 121 - 140, 158 - 164, 165 - 189, 261 - 271.

Subject 11. Procedure for Posting Guards.

Lesson 1. The order by which a relief goes to the sentry post and the length of watch in accordance with the seasons and weather conditions.

Lesson 2. The order of replacing a sentry, the posting of guards and the order of a sentry returning to the guard house.

Garrison Duty Regulations, Articles 216 - 222, 224 - 237.

III. Formation Training

A. Purpose of Study

1. To train the soldiers to maintain fine formation, to acquire an exemplary soldier's appearance and to execute promptly and correctly formation movement with and without arms.

2. To study how to ride in a motor vehicle, how to advance by a motor vehicle and how to dismount from a motor vehicle.

3. To achieve complete formation of a squad and platoon and master the actions for maintaining various formations and combat columns at the frontline.

B. Instructions on Methods

1. Formation training is the basis of a successful tactical training of soldiers and KUBUNDAE. Formation training will give soldiers and KUBUNDAE a firm knowledge about the entire requirements, movements and order of the Korean People's Army Formation Regulations. Formation training will give the soldiers and KUBUNDAE the ability to carry them out correctly.

2. The first phase of the winter training will be devoted entirely to individual training. From the day when young soldiers are inducted into the army, they must be taught to dress neatly and correctly, assume proper places in the formation and be constantly on the alert. The basic method to use in teaching actions to young soldiers is to give demonstrations after a brief explanation on the actions to be studied and then proceed with actual studies and later, practices. In this case, formation movements must first be studied in separate actions. When the soldiers have accurately mastered these separate actions, general study of the actions must be carried out. Thus, the soldiers must be drilled until they can automatically perform the actions.

3. In the second phase, attention must be paid to the completion of squad and platoon formations while furthering completion of individual training.

The lessons learned from formation training must be applied throughout the courses of study and to soldiers' daily life.

All the officers and non-commissioned officers must show exemplary formation movement to the soldiers, and constantly demand that the soldiers follow their example.

4. In formation training, special attention must be paid to the following matters.

a. To train soldiers quick movement, patience and the skill to rush and creep fiercely in the battlefield.

b. To train KUBUNDAE to promptly disperse, deploy and freely move about in dispersed formation and deployed formation.

c. To study how to ride in a motor vehicle and how to dismount from a vehicle.

Subjects and Allocation of Time

Subject Number	Title	Hours				
		Infantry, machine gun, antiaircraft machine gun, grenade discharger and reconnaissance KUBUNDAE	Artillery and mortar KUBUNDAE	SP Gun KUBUNDAE	Engineer, communication and chemical defense KUBUNDAE	Security KUBUNDAE
	First Phase Soldiers of one year in service					
1	General Rule, Formation and Command	4	4	-	4	4
2	Formation Movement and March Without Arms	12	12	4	12	12
3	Formation Movement and March With Arms	16	10	6	10	16
4	Advancing by Rushing and Creeping	8	4	-	4	8
	Total	40	30	10	30	40
	Second Phase Soldiers of various length of service					
5	Squad Formation	18	12	12	8	8
6	Platoon Formation	14	14	14	10	4
7	Company (Arty Battery) Formation	6	8	8	4	-
8	Advance by Motor Vehicle	4	-	-	3	3
	Total	42	34	34	25	15
	General total	82	64	44	55	55

Remarks: Antiaircraft, chemical defense and heavy grenade discharger KUBUNDAE will use the time allocated to Subject 7 for the completion of Subjects 5 and 6.

Note: The four hours allocated to the mortar KUBUNDAE of the battalion will be used for completing Subject 8.

First Phase

Subject 1. General Rule, Formation and Command.

Lesson 1. Soldiers' duty before alignment as well as general ideas on the formation, line formation, flank, front, interval, distance, width of the formation, rear of the formation and depth of the formation.

Lesson 2. Basic postures; command, delivery of command and its execution; one line formation of a squad and platoon as well as two line formation alignment; one line column and two line column alignment; road-march formation alignment of a platoon; alignment and change of formation during halt; starting and halting of march; and salute during halt and march.

Formation Regulations, Articles 1 - 17, 19 - 23, 30 - 38, 42, 68 - 72, 91 - 92, 94, 109 - 110, 127 - 129, 124 - 135.

Subject 2. Formation Movement and March Without Arms

Lesson 1. Basic posture and execution of command such as "Assemble," "Attention," "Rest," "Repeat," and "Fall in!" "Right face" ("Left face").

Lesson 2. About face during halt and salute during halt.

Lesson 3. Walking, parade march, march at ease, double time, changing cadence, and halt.

Lesson 4. To the rear march.

Lesson 5. Salute during march, and how to approach commanding officer and how to leave him.

Formation Regulations, Articles 19, 21, 22, 31 - 47, 68 - 73.

Subject 3. Formation Movement and March With Arms

Lesson 1. Basic posture with arms; commands for movement with arms during halt, such as "Sling arms," "Order arms," and "Sling arms across the back with muzzles up!"

Lesson 2. Execution of movement with arms during halt, such as "Shoulder arms," "Present arms," "Prepare for combat," and "Order arms!"

Lesson 3. Execution of movement with sub-machine guns during halt, such as, "Sling arms across the back with muzzles up," "Port arms," and "Sling arms!"

Lesson 4. Methods of "about face" and march as well as normal march and double time, and halt.

Lesson 5. Executing the command for movement with arms during march, such as, "Shoulder arms," "Order arms," and "Present arms!"

Lesson 6. Execution of the command for salute with arms during halt, such as "Present arms," and "Order arms!" (in case of using a sub-machine gun "Sling arms!") senior sergeant salute (TN Sic).

Lesson 7. Salute with arms during march, and how to approach a commanding officer and how to leave him while armed.

Formation Regulations, Articles 48 - 67, 74 - 82.

Subject 4. Advancing by Rushing and Creeping

Lesson 1. Execution of movements, such as, "Lie down," and "Stand up!" without and with arms, as well as rushing and creeping.

Lesson 2. Crawling on the stomach

Lesson 3. Crawling on elbows and crawling on side

Lesson 4. Rushing by combining various ways of crawling in accordance with the nature of terrain.

Formation Regulations, Articles 83 - 90.

Second Phase

Subject 5. Squad Formation

Infantry Squad:

Lesson 1. Deployment formation of a squad - one line formation and two line formation; squad formation and execution of command for alignment, such as, "Attention," "Rest," "Fall in" and "Fall out"; squad about turn; deployment and concentration of a squad during halt, execution of command, such as, "Lie down," and "Stand up!"; alignment toward the flanks; and change of the direction of formation.

Lesson 2. Squad deployment formation march with arms; deployment and concentration of a squad during march; changing the direction of march of a squad; change of squad formation, such as from one line formation into two line formation and from two line formation into one line formation; and execution of commands such as, "Assemble arms," "Lay down arms," and "Sling arms across the back with muzzles up."

Lesson 3. Squad's marching formation; changing of formation, such as from column into deployment formation and from deployment into column; changing of formation, such as from one line column into two line column and from two line column into one line column; and changing the direction of marching column.

Lesson 4. Formation salute during halt and during march; and squad's return of a salute to commanding officer's salute.

Lesson 5. Squad deployment into a skirmish line; squad advancing in a skirmish line; and advancing by assaulting.

Formation Regulations, Articles 91 - 125.

Reconnaissance KUBUNDAE:

Lesson 1, 2, 3, 4, and 5 will be carried out in foot formation. The contents of these lessons are same as the contents of Lesson 1, 2, 3, 4, and 5 for infantry KUBUNDAE.

Lesson 6. (This lesson will be carried out in foot formation.) Commanding signal and how to transmit it; how to signal during halt and during march, and practice of signal transmission.

Lesson 7. Alignment beside motor vehicles and execution of commands (signals) for actions, such as "Attention," "Assemble beside

motor vehicles," "Mount vehicles," "Ready," "Start engine," "Kill engine," "Forward," "Slow down," "Stop," and "Back up!" About turn.

Formation Regulations, Articles 91 - 126.

Machine Gun, Antiaircraft Machine Gun, Battalion Mortar, and Heavy Grenade Discharger KUBUNDAE:

Lessons 1, 2, 3, and 4 will be carried out without equipment. The contents of these lessons are same as Lessons 1, 2, 3, and 4 for infantry KUBUNDAE.

Lesson 5. Alignment of a squad armed with machine guns (mortar, grenade discharger). Emplacement (loading) of a machine gun (mortar, grenade discharger) and the methods of unloading it from a motor vehicle (pack saddle).

Lesson 6. Transportation of a machine gun (mortar, grenade discharger); occupation and moving of firing positions; advance by "pulling" or "pushing" machine guns.

Formation Regulations, Articles 91 - 118, 194 - 211, 234 - 244.

Artillery, Regimental Mortar KUBUNDAE:

Lessons 1, 2, 3, and 4 will be carried out without equipment. The contents of these lessons are same as Lessons 1, 2, 3, and 4 for infantry KUBUNDAE.

Lesson 5. Alignment of the men on duty in accordance with the command, such as, "Close ranks" and "Open ranks." Command to be delivered for making personnel mount vehicle from the side plates attached to the loading box of a motor vehicle, for the alignment of the personnel on duty after dismounting the vehicle and for making personnel ride in the vehicle only from the right plate and rear plate after getting off the vehicle; and for the alignment of the personnel on duty after getting off the vehicle; command to be delivered for starting marching; its execution; and stopping of the vehicle.

Formation Regulations, Articles 91 - 118; Artillery Manual, Formation and Fire Power Service, Articles 29 - 33

Self-Propelled Gun KUBUNDAE:

Lessons 1, 2, 3, and 4 will be carried out in foot formation. The contents of these lessons are same as Lessons 1, 2, 3 and 4 for the infantry KUBUNDAE.

Lesson 5. Actions to be taken beside the vehicle; alignment, mounting and dismounting vehicle; combat preparation of vehicles; and emergency call.

Formation Regulations, Articles 92 - 119.

Engineer, Communication, and Security KUBUNDAE:

Lessons 1, 2, 3, and 4 are the same as those of Lessons 1, 2, 3 and 4 for the infantry KUBUNDAE.

Formation Regulations, Articles 91 - 118.

Subject 6. Platoon Formation

Infantry KUBUNDAE:

Lesson 1. Alignment of the platoon deployment formation, platoon alignment during halt, and about face; double increase and decrease of the platoon ranks during march.

Lesson 2. Marching formation of platoon; changing of the platoon formation, from the platoon deployment formation into column and from column into deployment formation, as well as changing platoon formation from a column of threes (fours) into column of twos or ones and from column of twos or ones into column of threes.

Lesson 3. Formation salute during halt and during march, and platoon's return of salute to the commanding officer.

Lesson 4. Deployment of a platoon into line (wedge, vee) formation; deployment of platoon from a column; change of platoon's march direction; and platoon assembly.

Lesson 5. Deployment of platoon column into skirmish formation; advancing platoon deploying into skirmish formation (simultaneous advancing of the entire formation, as skirmishers rushing by squads and rushing by two squads and by one squad), changing of the frontal direction of the dispersed platoon formation, and advancing by attacking.

Formation Regulations, Articles 127 - 168.

Reconnaissance KUBUNDAE:

Lessons 1, 2, and 3 will be carried out in foot formation. The contents of these lessons are the same as those of Lessons 1, 2 and 3 for infantry KUBUNDAE.

Lesson 4 will be carried out on foot formation. Command signals to be delivered by flags (electric lights, hands) and how to deliver them, and practice of the methods of delivering and receiving signals.

Lesson 5. Assembly and alignment of a platoon beside motor vehicles; mounting and dismounting vehicles; deployment formation and marching formation of a platoon.

Lesson 6. Skirmish formation of a platoon; alignment during halt; changing of formation during march; moving and command of motor vehicles during march; stopping of vehicles; dismounting vehicles and combat preparations; concealment of vehicles.

Formation Regulations, Articles 127 - 156.

Machine Gun, Antiaircraft Machine Gun, Battalion Mortar and Medium Grenade Discharger KUBUNDAE:

Lessons 1, 2, and 3 (These lessons will be carried out without equipment.) The contents of these lessons are same as those of Lessons 1, 2, and 3 for infantry KUBUNDAE.

Lesson 4. Alignment of the platoon in deployment formation in front of motor vehicle (horse cart) with machine guns (mortars, grenade-launchers) how to emplace (load) a machine gun (mortar, grenade-launcher) and how to unload them from mortar vehicles (horse cart, pack saddles). Alignment beside motor vehicles, mounting and dismounting vehicles.

Lesson 5. Changing the formation of platoon, such as from deployment formation into column, from column into skirmish formation, from column into deployment formation, from skirmish formation into column; occupation and moving of firing positions; and transportation of mortars by means of pack saddles.

Formation Regulations, Articles 127 - 156, 212 - 224, 245 - 254, and 280 - 283.

Artillery and Regimental Mortar KUBUNDAE:

Lesson 1, 2, and 3 (These lessons will be carried out without equipment.) The contents of the above lessons are same as those of Lessons 1, 2 and 3 for the infantry KUBUNDAE.

Lesson 4. Deployment formation of a platoon; how to align a platoon in a line while dispositioning the personnel beside the guns in case on foot formation, and when riding in a vehicle; commands and signals for commanding a platoon, when the personnel ride in vehicles and when they start marching; and the execution of the above-mentioned commands.

Lesson 5. March formation; changing of the platoon formation into march formation from deployment formation; intervals between motor vehicles; adjustment of the marching speed; overcoming of obstacles; changing direction of march; deploying from marching formation without changing the direction of march; and halt.

Formation Regulations, Articles 127 - 156; Artillery Manual, Formation and Fire Mission, Articles 7 - 20, 27 - 49.

Self-Propelled Gun KUBUNDAE:

Lessons 1, 2, and 3 (These lessons will be carried out on foot formation.) The contents of these lessons are same as those of Lessons 1, 2, and 3 for the infantry KUBUNDAE.

Lesson 4. Assembly and alignment of a platoon beside self-propelled gun; mounting and dismounting vehicles; and assembly and riding in a vehicle during warning signal.

Lesson 5. Deployment formation ("platoon line") and march formation ("marching column"); changing of platoon formation, from deployment formation into march formation and from march formation into deployment formation; "line formation" combat formation of a platoon; alignment during halt and changing of formation during march.

Formation Regulations, Articles 127 - 156.

Engineer, Communication, Chemical Defense and Security KUBUNDAE:

Lessons 1, 2, 3, and 4. The contents of these lessons are same as those of Lessons 1, 2, 3, and 4 for the infantry KUBUNDAE.

Formation Regulations, Articles 127 - 161.

Subject 7. Company (Artillery Battery) Formation

Infantry KUBUNDAE:

Lesson 1. Deployment formation, in other words, alignment of two-line formation in line with a line formation of columns of a platoon; dispersion of a company and double increase of company ranks; and

changing of formations, such as from deployment formation into marching formation and from marching formation into deployment formation; alignment of a company into column; and formation salute during halt and during march.

Lesson 2. Extended formation (line, wedge and vee formation); changing of the company's direction of march halt and assembly.

Lesson 3. Company deployment from column into as skirmishers advancing and rushing as skirmishers; actions to take when surprised by enemies from land and sky.

Formation Regulations, Articles 69 - 193.

Reconnaissance KUBUNDAE:

Lesson 1. (This lesson will be carried out on foot formation.) The contents of this lesson are same as those of Lesson 1 for infantry KUBUNDAE.

Lesson 2. Assembly and alignment of a company beside the vehicles; riding in a vehicle; company formations, in other words, deployment formation, marching formation, skirmish formation; alignment during halt and changing of formation during march; advancing in march column; organization of observation; command of vehicles and KUBUNDAE; orders, signals and their executions; stopping vehicles; dismounting vehicles; actions to take when surprised by enemies from land and sky.

Formation Regulations, Articles 169 - 179, 184 - 185.

Machine Gun and Mortar KUBUNDAE:

Lesson 1. (This lesson will be carried out without equipment.) The contents of this lesson is the same as those of Lesson 1 for infantry KUBUNDAE.

Lesson 2. Alignment in deployment formation; and organization of formations, such as, from deployment formation into marching formation, and from marching formation into deployment formation.

Lesson 3. Deploying a company into a line formation (wedge formation or vee formation) and advancing of a company in open formation.

Formation Regulations, Articles 169 - 179, 184 - 185, 225 - 233, 255 - 256.

Artillery and Regimental Mortar KUBUNDAE:

Lesson 1. (This lesson will be carried out without equipment.) The contents of this lesson are same as those of Lesson 1 for infantry KUBUNDAE.

Lesson 2. Deployment formation of artillery company; alignment in a line formation when on foot and when riding in a vehicle while dispositioning personnel beside the guns; commands which are to be delivered for alignment and their execution.

Lesson 3. Marching formation of an artillery company; alignment of an artillery company into columns by guns; changing an artillery company formation from deployed formation into marching formation; adjustment of marching speed; changing the direction of march; shifting from marching formation into deployed formation without changing the direction of march or while changing it; dispersion of an artillery

company when marching; and changing of formation into column after dispersion.

Formation Regulations, Articles 169 - 179, 184 - 185; Artillery Manual, Formation and Firing Service, Articles 7 - 49.

Self-Propelled Gun KUBUNDAE:

Lesson 1. (This lesson will be carried out on foot formation.) The contents of this lesson are same as those of Lesson 1 for infantry KUBUNDAE.

Lesson 2. Alignment of artillery company beside motor vehicles; mounting and dismounting motor vehicles; assembly during warning signal and riding in self-propelled gun.

Lesson 3. Deployed formation of an artillery company; a line formation of an artillery company; marching formation of an artillery company, marching column; and changing of the formation of a company, such as from deployed to marching formation and from marching to deployed formation.

Lesson 4. Changing the formation of an artillery company from marching formation into dispersed formation, "one line form of the dispersion of platoon column"; alignment during halt and changing of formation during marching.

Formation Regulations, Articles 169 - 179, 184 - 185.

Engineer and Communication KUBUNDAE:

Lessons 1 and 2. The contents of these lessons are the same as those of Lessons 1 and 2 for the infantry KUBUNDAE.

Formation Regulations, Articles 169 - 179, 184 - 188.

Subject 8. Advance by Motor Vehicles

Alignment before riding in motor vehicles; inspection of weapon; procedure for loading equipment and the procedure for the personnel's riding in motor vehicles; actions on the road; command signals and their transmission; duties of the motor vehicle crews and crew chief; procedure by which the personnel will dismount motor vehicles; procedure for unloading equipment; and actions to be taken when surprised by the enemy.

Formation Regulations, Articles 273 - 297.

IV. Physical Training

A. Purpose of Study

To develop in soldiers physique, patience, promptness, readiness to train with physical training equipment, readiness and skill to carry out hand-to-hand combat and to overcome obstacles, and the ability to move on skis.

B. Instructions on Methods

1. Program relating to physical training must be performed evenly without long intervals between lessons. In giving lessons, physical responsibilities must be gradually elevated in accordance with article 28 of the physical training manual published in 1948.

2. During the physical training lessons, the leader must ask the students to correctly execute formation movement during alignment, marching and halt. During gymnastics lessons, the leader must also ask the students to correctly execute formation movement in approach and leaving physical training equipment.

3. To ensure successful physical training of soldiers, the following must be observed:

a. Physical training must include the repeating of actions previously studied, and at the same time elevate the physical responsibilities of the students. In this case, collective and successive methods of performing the actions will be applied to each lesson.

b. The time allocated for the fundamental part of the physical training lessons must be utilized for the exercises of iron-bars and parallel bars. For this purpose, the platoon personnel will be assigned to the horizontal-bars and wooden-bars a squad at a time. As for all the other equipment (vaulting horses, rope, log-bridge) or the items of practice (weights, ring, swing), one squad will be assigned to two items of equipment (or two practice events).

c. When the soldiers have mastered hand-to-hand combat, the overcoming of obstacles and walking with skis on, they must be trained under more complicated terrain and conditions (collective study, severed area, trenches, communication trenches, etc) so as to accelerate the completion of physical training and the skill in the use of military equipments.

d. Mass sports activities of the KUBUNDAE must be organized; especially, mass sports activities such as militarily applied events, running races, games and heavy gymnastics must be organized.

e. In going out-door for lessons and in returning, men must be made to do double time and to run.

f. To strengthen shoulders and muscles of stomach and arms, the following things must also be included in the training schedule: practice of bending and stretching the elbows between two parallel bars; practice of lifting and lowering the body or legs while facing the ground; and lifting dumb-bells above the shoulders, thrusting them forward or pushing them down.

4. In areas where there is no snow or water, the time allocated to skiing or swimming must be utilized for 1 km, 3 km and 5 km races and for obstacle course training.

Subjects and Allocation of Time

		Hours			
		All KUBUNDAE Excluding Self-Propelled Gun KUBUNDAE		Self-Propelled Gun KUBUNDAE	
Subject Number	Title	1st Phase	2d Phase	1st Phase	2d Phase
1	Physical Training	14	9	-	10
2	Hand-to-Hand Combat	6	4	-	-
3	Obstacle Course Training	3	4	3	6
4	Ski Training	7	13	7	14
	Total	30	30	10	30

Remarks: 1. In the first phase, physical training time for the seasoned soldiers will not be planned.

2. In the second phase, the following will be completed with new soldiers: The first collective event will be completed in the physical training; the first six lessons will be completed in hand-to-hand combat; and the first three lessons will be completed in obstacle course training and in ski training. The rest of the lessons will be completed with all soldiers, old and new, participating.

Subject 1. Physical Training

First Collective Training.

Lesson 1. Horizontal bar - Pulling while bending and lifting the knees to the chest; parallel bars - bending and stretching the elbows while leaning on the parallel bars; vaulting-horse (height: 105 - 110 cm) - Standing on the knees and jumping down to the front; log bridge (height: 130 - 150 cm) - walking at normal pace.

Lesson 2. Horizontal bar - Pulling while bending and lifting the knees to the chest; parallel bars - bending and stretching the elbows while leaning on the parallel bars; climbing rope (pole) with hands and feet; and acrobatic feats - backward somersault with the aid of support.

Lesson 3. Horizontal bar - climbing by hanging legs; parallel bars - opening and closing the legs while moving the legs back and forth between the parallel bars; vaulting-horse (height: 120 cm) - jumping up and jumping down with legs spread; and load carrying race - two men carrying a man.

Lesson 4. Horizontal bar - Climbing by hanging legs; parallel bars - opening and closing the legs while moving the legs back and forth between the parallel bars; vaulting-horse (height: 120 - 125 cm) - jumping up and jumping down with legs spread; log bridge (height: 130 - 150 cm) - walking backward and walking side-way; game "leapfrog."

Lesson 5. Horizontal - hanging down backward; parallel bars - jumping on the parallel bars and sitting on them by stretching and spreading the legs on both sides; climbing rope (pole) by using feet; and acrobatic feats - tumbling backward and forward.

Lesson 6. Horizontal bar - hanging down backward; parallel bars - jumping on the parallel bars and sitting on them by stretching and spreading the legs; jumping over a vaulting-horse placed lengthwise; and load carrying race - lifting of ammunition boxes (dumbbells).

Lesson 7. Horizontal bar - hanging down backward; parallel bars - sitting on the parallel bars with both legs stretched and spread on both sides; climbing a slanted ladder; jumping over a vaulting-horse placed lengthwise.

Lesson 8. Horizontal bar - swinging back and forth, hanging on the horizontal bar; parallel bars - jumping on the parallel bars while turning the body between the two bars and sitting on the parallel bars with the back bent, legs spread and hands holding the parallel bars; jumping over a rope (narrow board) stretched side-ways; and log bridge (height: 130 - 150 cm) - walking on log by moving hands and feet for balance.

Lesson 9. Horizontal bar - swinging back and forth, hanging on the bar; parallel bars - sitting on the parallel bars by jumping on them while turning the body between the two bars; climbing a slanting rope; jumping over a vaulting-horse (height: 2.5 m) placed lengthwise; ring swing - revolving by two persons.

Second and Third Collective Trainings

Lesson 10. For soldiers with one year service: horizontal bar - turning backward with legs hung on the horizontal bar; parallel bars - turning forward while bending the body; climbing rope (pole) by using hands only; and load carrying race - carrying of one person by two persons.

For seasoned soldiers: horizontal bar - climbing up by hanging the legs on the bar after swinging the body back and forth, hanging on the bar; parallel bars - lifting of the legs, leaning on the two bars; rope climbing in three movements; and load carrying race - two persons carrying one person.

Lesson 11. For soldiers with one year service. Horizontal bar - turning backward with legs hung on the bar; climbing rope (pole) by using hands only; vaulting-horse - jumping over by bending the legs; log bridge (height: 130 - 150 cm) - walking with load; acrobatic performances - cartwheels; and games "prompt changing of formation."

For veteran soldiers. Horizontal bar - climbing on the horizontal bar with legs hung on the bar after swinging back and forward, hanging on the bar; climbing rope in "three movements"; jumping over a string "side-ways"; log bridge (height: 130 - 150 cm) - walking after stopping; acrobatic performances - returning to the front by swinging the body; and games "prompt changing of formation."

Lesson 12. For soldiers with one year service. Horizontal bar - turning backward with legs hung on the bar; parallel bars - turning forward by bending the body; vaulting-horse - jumping over the vaulting-horse with legs bent; and load carrying race - lifting of ammunition boxes (dumbbells).

For seasoned soldiers. Horizontal bar - climbing on the bar with legs hung on the bar while swinging the body back and forth; parallel bars - lifting of legs by leaning on the parallel bars; jumping over a string "sideways"; and load carrying race - lifting of ammunition boxes (dumbbells).

Lesson 13. For soldiers with one year service, parallel bars - turning forward by bending the body; climbing a rope (pole) by using hands only; vaulting horse - jumping over the vaulting-horse with legs bent; log bridge (height: 130 - 150 cm) - walking after stopping; and acrobatic performances - returning to the front by turning the body.

Lesson 14. For soldiers with one year service. Horizontal bar - hanging on the bar with the back of the knees, head downward; parallel bars - bending and stretching the elbows while swinging the body back and forth; climbing on a rope (pole) by using hands only; and load carrying race - carrying a person on the back.

For seasoned soldiers. Horizontal bar - climbing up the bar by putting the legs on the bar while hanging on the bar and swinging the body back and forth; parallel bars - standing on shoulders; climbing a rope in "three movements"; and load carrying race - carrying a person piggy back.

Lesson 15. For soldiers with one year service. Horizontal bar - hanging down with both knees hung on the bar; parallel bars - bending and stretching the elbows by swinging the body back and forth; vaulting-horse - jumping over a vaulting-horse sideways; and log bridge (height: 130 - 150 cm) - normal walking.

For veteran soldiers. Horizontal bar - climbing on the horizontal bar by supporting the body with the elbows; parallel bars - standing on shoulders; vaulting-horse - jumping over a vaulting-horse placed lengthwise with both legs spread; and log bridge (height: 130 - 150 cm) - walking after stopping.

Physical Training Manual, Articles 67 - 101.

Subject 2. Hand-to-Hand Combat

Lesson 1. On guard position; advancing in the on guard position; bayonet thrust in normal formation without dummy; and running for 200 meters at normal speed.

Lesson 2. Bayonet thrust without dummy in a formation combined with the advancing in the on guard position exercise; on guard position during normal and double time march; and hurling hand grenade from fixed position and from a trench.

Running for 400 meters at ordinary speed.

Lesson 3. How to bayonet a dummy without moving from a position; parrying to the right; changing the direction of on guard position; throwing of hand grenades during march and during double time march; and running for 600 meters at normal speed.

Lesson 4. Bayonetting a dummy while advancing one or two steps forward; bayonetting a dummy after pivoting; assaulting a dummy on the night; bayonetting a dummy with combination of methods; attacking a dummy on the left; beating a dummy on its side with the butt of a rifle; throwing hand grenades from the kneeling position; and running for 800 meters.

Lesson 5. Assaulting a dummy to the left and right and bayonetting a dummy with the combination methods; bayonetting a dummy during march and during double time march; beating the front part of a dummy with the butt of a rifle; throwing hand grenades at targets; and running 1,000 meters at normal speed.

Lesson 6. Execution of the tactics based on carbines and hand grenade throwing and obstacle course training.

1. Bayonetting a dummy after hopping over an obstacle.

2. Bayonetting two to three dummies in the course of jumping over and removing obstacles using both feet, and throwing hand grenades for distance.

3. Jumping over obstacles using one or both feet; bayonetting two to three dummies while repulsing them; jumping over an obstacle "while attacking"; throwing hand grenades into trenches 20 - 25 meters away; bayonetting a group of dummies by repulsing the dummies to the right and left alternately, repulsing of dummies to the left; beating sides of dummies with the butt of the rifle; and running for 1,500 meters at normal speed.

Lesson 7. Repulsing dummies to the right and left and bayonetting a group of dummies by combining the above-mentioned methods, and beating from sides and front; bayonet drill with carbines whose ends are fixed with paddings; throwing antitank hand grenades (first method); running 1,500 meters at normal speed.

Lesson 8. Bayonetting a group of dummies which are in front of and in fox-holes in combination with the parrying exercise; beating the back of dummies with the butt of the rifle; parrying to the right and bottom; throwing of antitank hand grenades (second and third methods); and running 2,000 meters at normal speed.

Lesson 9. Execution of tactics using carbines; and collective training in hand grenade throwing and obstacle course.

1. Jumping over obstacles with one or both feet.

2. Bayonetting of dummies combined with parrying exercise.

3. Jumping over obstacles while attacking and throwing hand grenades into fox-holes at a distance of 25 - 30 meters.

4. Destruction of a group of dummies by bayonetting and by striking the butt of the rifle in combination with parrying exercise.

5. Scaling obstacles by supporting the body with one hand and one foot.

6. Destruction of a group of dummies by bayonetting and by striking with the butt of the rifle combined with the repulsing of a group of dummies which are in front of, and in fox-holes.

Physical Training Manual, Pages 132 - 159, 313, 328 - 332.

Subject 3. Obstacle Course Training

Lesson 1. Jumping over obstacles using one or both feet; jumping over obstacles "while attacking"; one hand jump over obstacles; and running 200 meters at normal speed.

Lesson 2. Scaling obstacles by supporting the body with a hand and foot; creeping over a fence with other comrade's help; scaling fences; jumping down from a hanging position and jumping down from a fence from a position in which the body is parallel with the top of the fence; exercise in overcoming individual obstacles and group of obstacles; and running 400 meters at normal speed.

Lesson 3. Vaulting an obstacle by using both hands; jumping down in the sitting posture and standing posture; crossing log bridge in normal walk and in double-time; exercise in which various methods is used to overcome an obstacle; and running 600 meters at normal speed.

Lesson 4. Scaling an obstacle with the aid of a rope; overcoming a group of individual obstacles and a 200-meter area of obstacles (without throwing the hand grenades and without destroying dummies with bayonets and the back plates of rifles); and running for 800 meters at normal speed.

Lesson 5. Scaling a fence by sheer force; prompt overcoming of an area of 200-meter obstacles (without throwing hand grenades and without destroying dummies with bayonets and rifle butts) and running 1,000 meters at normal speed.

Physical Training Manual, Pages 162 - 178, 328 - 332.

Subject 4. Training Ski

Lesson 1. Ski equipment, and knowledge about the methods of handling and preserving it; choice of skis and ski sticks; fixed training of skiing; rubbing resin on the skis; and ski oil and how to apply it.

Lesson 2. Basic posture of holding skis; how to carry and put on skis; how to turn about by crossing the feet with the skis on during halt; normal march; and 3-km march.

Lesson 3. Completion of normal march; how to climb hill at normal pace; how to ski downhill in low posture; and 5-km march.

Lesson 4. Completion of normal march; how to execute about face during halt and climb uphill by "duck walk"; descending a mountain in a normal posture; and 8-km march (of which, one kilometer march will be carried out without using sticks).

For seasoned soldiers: Mastering ski methods already studied (completion of normal march and walking with the aid of the sticks); ascending and descending a mountain by "CHECH'ASIK*."

Lesson 5. Completion of normal march; how to walk with the aid of sticks (for seasoned soldiers, marching by T'UJINBOP*); and running 10 kilometers.

Lesson 6. Mastering running march using sticks; how to overcome obstacles; methods of ascending by a "zigzag" course; descending a mountain in normal and low postures; how to execute turn by crossing the feet while descending a mountain; eight-kilometer walk in a normally severed area (of which, two kilometers will be covered by running without using sticks).

For seasoned soldiers: Completion of marching by T'UJINBOP*; methods of halting by falling down; and methods of running for 10 - 15 km in a severed area.

Lesson 7. Running for 10 - 15 km in a severed area (veteran soldiers will run for 20 km).

Lesson 8. Methods of running in the shortest possible time for 10 km in a severed area. (seasoned soldiers will run for 20 km).

Physical Training Manual, Pages 183 - 210, 321 - 328.

V. Engineer Training

A. Purpose of Training

1. To teach soldiers with one year service how to dig a trench and camouflage themselves; various methods for overcoming obstacles, and methods of digging and improving foxholes (covered trenches).

2. To teach seasoned soldiers the methods of setting up foxholes (covered trenches) and digging foxhole in column; reconnaissance methods, repair and protection of bridges, methods of setting up wire entanglement and mine, and overcoming of the above-mentioned obstacles; deepening knowledge already acquired, and mastering engineer operations.

B. Instructions on Methods

The engineer training exercise will be carried out either at the engineer training ground or at the model training ground established by authorities concerned with engineer.

During lessons, special attention will be paid to the training in the actual engineer operations methods. The skills acquired from the engineer training lessons will be further developed later in tactical exercises incorporating all the lessons covered.

Training in camouflage will begin with the showing of the men the regulation camouflage equipment, available camouflage equipment, and the methods of utilizing these, followed by explanations. Only after going through the above exercises will soldiers gain accurate grasp of how camouflaging is done. Training in foxhole digging will be conducted under the same procedure.

Training in foxholes (covered trenches) digging will be carried out in an area well equipped to meet the students' speciality. To teach the actual methods used, disassembled elements required in the construction of foxholes and materials required in obstacle training will be prepared in advance; before the lesson starts students will assemble in the area where the lessons are to be conducted.

Actual work of digging (TN: of foxholes) in column, reconnaissance of a bridge, and the actual work of repairing and strengthening a bridge will be conducted on the field or at the existing bridges.

Lessons relating to the study of explosives will be carried out by personnel below platoon level under safety measures and officers' guidance.

Study of mine and actual operations relating to reconnaissance and sweeping of mines will be carried out with dummy mines to which fuse and detonators will be attacked for study purpose.

Live mines should not be used during training exercises. Seasoned soldiers will be mobilized to demonstrate the methods (movement) of executing the engineer operations to soldiers with one year service; they may be assigned the role of commanding officers in order to supervise the actual operations.

Subjects and Allocation of Time

Subject Number	Title	Hours		
		All KUBUNDAE Excluding SP Gun, Chemical Defense, Communication and Security KUBUNDAE	SP Gun KUBUNDAE	Communication, Chemical Defense and Security KUBUNDAE
	First phase			
	Soldiers with one-year service			
1	Camouflage and Entrenching	6	–	6
2	Construction and Overcoming of Anti-Infantry Obstacles	4	–	4
3	Utilization of Surface Objects in Combat	2	–	2
	Total	12	–	12
	Seasoned soldiers			
4	Outfitting Foxholes (Covered Trenches)	10	4	7
5	Explosives	–	–	2
6	Mine Obstacles	6*	6*	6
7	Column Route	6	–	–
8	Reconnaissance, Repair and Strengthening of Bridges	–	6	–
	Total	22	16	15
	Second Phase			
	All Soldiers			
9	Construction of Squad (Artillery Squad, Crew) Foxholes (Covered Trenches)	10	10	6
10	Construction and Overcoming of Obstacles	6	10	–
	Total	16	20	6

Note: Time will be allocated only for the study of Lessons 2 and 5 under the weather conditions of winter.

First Phase

Subject 1. Camouflage and Entrenching

Lesson 1. Signs which reveal camouflage. Regulation materials for camouflage and their purpose; utilization and preservation; methods by which soldiers will camouflage themselves by utilizing regulation materials and available materials.

Lesson 2. Engineer tools to be carried and their purpose; utilization and preservation; and whetting and repair of tools.

Lesson 3. Choice of position of individual slit trench and its construction and camouflage; methods of enlarging slit trench into foxholes which permits both kneeling and standing firing position; and entrenching in various types of soil and in snow.

Subject 2. Construction and Overcoming of Anti-Infantry Obstacles

Lesson 1. Knowledge about the basic forms of wire obstacles; methods of setting up knife rest and hedgehog, and concertina, and barely noticeable wire entanglement on the frontline.

Lesson 2. Methods of overcoming wire obstacles and action.

Subject 3. Utilization of Surface Objects in Combat

Lesson 1. Utilizing shells, shell craters and foxholes left by the enemy.

Lesson 2. How to utilize in combat, ditches, fences and individual buildings.

Subject 4. Outfitting Foxholes (Covered Trenches)

Methods of covering the steep slopes of the foxholes with twigs, logs and boards; providing exits in foxholes; draining system of foxholes (covered tenches); how to construct obstructing walls and mud caves.

Subject 5. Explosives

Explosives, detonating fuse and their characteristics and use.

Subject 6. Mine Obstacles

Lesson 1. Forms of mines and explosive devices, and their purpose and functions; handling mines and fuse, and safety measures.

Lesson 2. Laying mines and camouflaging them.

Lesson 3. Detection of mines by telltale signs; mine detector and how to use it; how to mark off detected mine and mine field and passage through mine field.

Lesson 4. How to remove mine and deactivate it.

Lesson 5. How to open a passage through mine field and the procedure for moving through this passage; and precautionary measures to observe in occupying mined area left by the enemy.

Subject 7. Column Route

Lesson 1. Reconnaissance and passing of column route.

Lesson 2. How to open passages through various obstacles and barriers; and how to conceal column route by utilizing fences, flare signals and sand bags.

Subject 8. Reconnaissance, Repair and Strengthening of Bridges

Lesson 1. The basic parts of a bridge, their nomenclature and purpose; reconnaissance with respect to bridges, in other words, to determine conditions of approaches to bridges and of the bridges themselves. Reconnaissance to determine the size of bridges and their basic parts.

Lesson 2. Minor repair of bridges (replace damaged or decayed floating board, stakes, railings and beams and repair of approaches); reinforcing floating board and beams, with additional wood and pillars.

Second Phase

Subject 9. Construction (1) of Squad (Artillery Squad, Crew) Foxholes (Covered Trenches)

Lesson 1. Basic parts of foxholes, their measurements and purpose; procedure of operations for foxholes (covered trenches); digging and camouflaging.

Lesson 2. How to set up loopholes and light covers in foxholes, and wall trenches for ammunitions; and knowledge about covered trenches for personnel and equipment.

Training in the methods of making supplementary plans and the methods of constructing covered trenches for personnel and equipment will be given to seasoned soldiers.

Lesson 3. Knowledge about the construction and outfitting of entrenchments and communication trenches.

Subject 10. Construction and Overcoming of Obstacles

All KUBUNDAE Except Self-Propelled Gun KUBUNDAE:

Lesson 1. Portable wire obstacles and their purpose; and methods of constructing and setting up prepared obstacles at the frontline.

Lesson 2. Fixed wire obstacles; and installation of three-line standard wire entanglement.

Lesson 3. How to overcome wire obstacles; how to open passages through wire obstacles; and methods of strengthening wire obstacles.

Footnote: (1) The elements will complete the subjects corresponding to their specialty.

Self-Propelled Gun KUBUNDAE:

Lesson 4. Explosive anti-tanks obstacles, their purpose and general dimension.

Lesson 5. Methods of overcoming non-explosive antitank obstacles and opening of passages through them; methods of strengthening the obstacles; and practice in overcoming obstacles.

VI. Anti-Chemical Training

A. Purpose

1. To train soldiers with one year service how to utilize anti-chemical equipment and how to decontaminate poisoned area, and the general knowledge of poisons used by foreign troops.

2. To train seasoned soldiers how to carry out chemical reconnaissance, deepen their knowledge already acquired and complete their training in chemical observation, in decontamination methods, and in the use of smoke generators.

B. Instructions on Methods

Anti-chemical training lessons will be given by platoon leader either on the training ground or in the chemical lecture hall. During the lessons, visual aids, equipment, reference books, model of chemical equipment, individual anti-chemical defense equipment, decontamination equipment and models of smoke generators will be utilized.

Soldiers must acquire the basic knowledge and mastery on the chemical defense within the time allocated in the schedule. Later, they will further their knowledge and skill they have acquired through tactical lessons and maneuvers, and through special exercises relating to the utilization of anti-chemical defense equipment.

Seasoned soldiers will further their knowledge acquired in the first year of their training during their anti-chemical defense training lessons. At the same time, they will perform the duties of the reconnaissance team chiefs, artillery squad leaders and team leaders during the combined lessons with green soldiers.

During lessons, trainees must be familiarized with anti-chemical defense duties, the correct way and promptness in putting on and taking off anti-chemical equipment, taught the knowledge and skill in the use of new equipment for decontaminating weapons and equipment, taught duties relating to chemical observation and to promptly warn the KUBUNDAE of the enemy's chemical attack.

Decontamination of contaminated area as well as reconnaissance and observation of contamined area must be carried out only under simulated combat conditions. The length of time for wearing gas masks during simulated combat exercises is from 30 minute to three hours at the end of winter training. This will be extended to five hours at the end of summer training. As a rule the training in the wearing of gas masks for extended period will be carried out concurrently with out-door combat exercises and maneuvers.

Subjects and Allocation of Time

Subject Number	Title	Hours
	First Phase	
	Soldiers with one-year service	
1	Toxic Agents Used by Foreign Troops	2
2	Gas Masks for General Arms	2
	Total	4
	Seasoned soldiers	
3	Toxic Agents	2
4	Chemical Observation	2
5	Chemical Reconnaissance	4
6	Decontamination of Weapons, Technical Combat Equipment and Area Under Simulated Combat Condition	4
7	Use of Smoke Screen by KUBUNDAE	3
	Total	15
	Second Phase	
	All soldiers	
8	Anti-Chemical Defense Equipment for Skin Protection	1
9	Emergency Decontamination	1
10	How to Overcome Contaminated Areas	1
11	Soldiers' Duties in Chemical Observation	1
12	Use of Gas Masks in Contaminated Air	2
	Total	6

First Phase

Subject 1. Toxic Agents Used by Foreign Troops

Foreign troop methods and purpose of using toxic agents in combat; classification of toxic substances by their physiological effect and by tactical use; properties of poisonous agents, vesicants, asphyxiators, irritants, and lacrimators; visual detection of toxic agents; and decontamination and emergency treatment.

Subject 2. Gas Masks for General Arms

Role of the Soviet scholars in manufacturing the world's best gas mask; purpose, construction and care of general arms gas masks; choice and

combination of anti-gas hood; how to examine and store mask in its bag; wearing gas masks by the numbers during march; how to put on gas masks and how to take them off; how to put gas masks on the wounded; procedure of checking gas masks for leaks; how to utilize damaged gas masks; and using gas masks in winter.

Subject 3. Toxic Agents

Chemical weapons of foreign troops and their tactical use; toxic agents under combat condition and their persistency; physiological effect and effect on inorganic bodies and food; estimating amount of toxic agents settling in an area and on surfaces of objects; use of toxic agents in winter; and decontamination and methods of treatment when contaminated by persistent and nonpersistent toxic agents.

Subject 4. Chemical Observation

How to observe and detect telltale signs of enemy's preparations to launch chemical assault; movement of the lookouts during the enemy's chemical assault; and how to visually determine areas which were contaminated.

Subject 5. Chemical Reconnaissance

Lesson 1. Duties and types of chemical reconnaissance; duties of the patrol team when confronted with contaminated area; operational procedure for patrol team leader and patrol team personnel; carrying out winter reconnaissance; how to determine contaminated areas and contaminated surface objects by external signs; and procedure for investigating contaminated areas and contaminated surface objects.

Lesson 2. Actions of the reconnaissance team during the reconnaissance in contaminated areas; establishment of the duties of reconnaissance in contaminated areas; occupation of the jump-off point as well as establishment of patrol duties; patrol activities; patrol team and patrol command; going to the assembly point; and patrol leader's report.

Subject 6. Decontamination of Weapons, Technical Combat Equipment and Area Under Simulated Combat Condition.

Lesson 1. Complete decontamination of weapons and equipment within the combat formation.

Lesson 2. Decontaminating area contaminated with persistent poisonous agents; decontaminating entrenchments and communication trenches; how to deploy powerful decontaminating apparatuses and how to open a passage through contaminated area by burying the contaminated strata of earth (snow), removing and isolating it; and safety measures during decontamination operations.

Subject 7. Use of Smoke Screen by KUBUNDAE

How to conceal the combat actions of KUBUNDAE with smoke screen; duties of soldiers who lay smoke screen and their positions within the combat order; and actions of soldiers who lay smoke screen in assaulting pillboxes, transferring firing positions and in evacuating equipment from the frontline.

Second Phase

Subject 8. Anti-Chemical Defense Equipment for Skin Protection

Purpose of gas-proof mantles, gas-proof clothes, gas-proof socks, gas-proof fatigue and light gas-proof cothing and how they are used under various combat situations.

Subject 9. Emergency Decontamination

Purpose and construction of the individual chemical-aid packet; how to utilize it; and emergency procedure for decontaminating weapons and equipment.

Subject 10. How to Overcome Contaminated Areas

General definition of contaminated areas and the rules of decontamination; preparations for utilizing gas-proof clothes; how to stay in contaminated area and how to overcome the contaminated area by donning gas-proof clothes; advancing by rushes in gas-proof clothes to deliver fire; and soldiers' duties after overcoming areas contaminated with toxic agents.

Subject 11. Soldiers' Duties in Chemical Observation

Basic signs to warn of enemy's chemical attack; observation on the enemy, zone and disposition of friendly forces; actions of observation troops during chemical assault; and chemical attack warning signals and the procedure of delivering these signals.

Subject 12. Use of Gas Masks in Contaminated Air

Checking tightness of gas masks in a room which has 0.85 grams/M^3 and 8.5 grams/M^3 of chloropicrin; determining whether a gas mask is damaged or not; and how to utilize a damaged gas mask in the contaminated air and how to replace it.

VII. Military Topography

A. Purpose of Training

1. To train soldiers in azimuth reading and movement based on such reading and to give soldiers elementary skill in reading greatly reduced scale maps.

2. To teach patrols belonging to the artillery and mortar KUBUNDAE the simplest methods for drawing map suitable for their purpose in addition to the above-mentioned matters.

3. To thoroughly teach non-commissioned officers and soldiers map reading, guiding activities, how to determine azimuth on the frontline, riding on an self-propelled gun, and movement on a given azimuth.

B. Instructions on Methods

1. All lessons relating to the military topography will be handled by platoon leaders. He will use his best prepared noncommissioned officers as helpers in conducting actual lessons outdoors.

Methodical guidance in topography training will be provided by the duty officers of topography in the combined unit.

2. Actual training of soldiers will be carried out in the lecture hall and on the field. The commanding officer must give a briefing on each duty, demonstrate how it should be done, and then, train the soldiers until they completely master their duties.

Before carrying out the outdoor lessons, the leader must select in advance the area which will be studied, carry out reconnaissance on the field concerning his study, point out the objects of his demonstration, and determine the designated duties and movements.

The road to and from the study ground will be utilized to practice and further the skill in the lessons already learned.

3. In training troops belonging to the reconnaissance KUBUNDAE, special attention must be paid to the troops ability to determine the azimuth under any circumstances and to correctly determine and point out their locations and the location of the target discovered, on a small-scale map (sketch).

4. The study of "the method of determining azimuth in the field and advancing on a designated bearing" will be conducted outdoor. The first lesson (demonstration) will be carried out in a semi-blocked area with as varied topography and surface objects as possible, and the later lessons will be carried out in a more complicated terrain.

5. Each actual lesson will be ended with instructive evaluation and at the same time superior activities and errors committed will be pointed out. The knowledge and skills acquired from the study of topography will be solidified and deepened in the tactical training lessons.

Subjects and Allocation of Time

Subject Number	Title	Hours		
		SP Gun KUBUNDAE and All KUBUNDAE Excluding Reconnaissance Troops Belonging to the Artillery and Mortar KUBUNDAE	Reconnaissance Troops Belonging to the Artillery and Mortar KUBUNDAE	SP Gun KUBUN-DAE
	First Phase			
	Seasoned soldiers			
1	Map Reading*	14**	10	-
	Total	14	10	-
	Second Phase			
	All Soldiers			
2	Determining Azimuth on the Field and Advancing on a Given Bearing	4	6	4

Subject and Allocation of Time, cont'd

Subject Number	Title	SP Gun KUBUNDAE and All KUBUNDAE Excluding Reconnaissance Troops Belonging to the Artillery and Mortar KUBUNDAE	Reconnaissance Troops Belonging to the Artillery and Mortar KUBUNDAE	SP Gun KUBUN-DAE
3	Measuring Distances on a Map	2	6	3
4	Map Reading	4	8	8
5	Grid Coordinate	-	10	-
	Total	10	30	15

* The communication soldiers belonging to the engineer, chemical defense and security KUBUNDAE and to the artillery and mortar KUBUNDAE will not study this subject.

** Ten hours will be allocated to the duty personnel belonging to the artillery and mortar KUBUNDAE

First Phase

Subject 1. Map Reading

Lesson 1. Indication of a point and contour line; catenary, intermediate contour line, and CHOGOKSON*; and determination of the height of the points as well as their mutual excess height based on the map. (TN Sic).

Lesson 2. General description of typical forms of slopes and angle of inclination; forms of slopes and their influence on camouflage, observation and firing; angle of inclination and its effect on passage through the area and speed of movement; vertical height, horizontal distance, and angle of inclination of the slopes; general explanation of their interdependence; determining the forms of angle of inclination and the extended distance by using maps; and methods of determining the division of reduced scale rule and determining by eye-sight the angle of inclination of slopes.

Lesson 3. How to determine from a map, points which are mutually visible.

Lesson 4. How to select observation posts, firing positions and covered approaches, and how to obtain march data from the maps.

Second Phase

Subject 2. Determing Azimuth on the Field and Advancing on a Given Bearing

Lesson 1. The principle and methods for determining direction on the field by the use of reference points and the four cardinal points; compass and its purpose; construction of a compass and care; how to determine east, west, south, and north by the sun and by other

indications; how to select reference point and utilize it in order to determine one's own position in an open area and in the blocked area; how to indicate a reference point and hold fast to a given course; remember terrain feature and find one's way back.

Lesson 2. Azimuth; measuirng angles by protractor; how to determine in the field the bearing by compass by available materials and by visual observation; how to determine directions from a given bearing during a halting point; advancing on a given bearing and detouring around obstacles; check whether the given direction is correctly maintained; and how to determine azimuth on the road by the sun and various signs.

Lesson 3. (Only for the reconnaissance troops belonging to artillery and mortar KUBUNDAE.) How to move three to four km of marching route on a given bearing under the condition of limited visibility. (When snow is piled up, the movement will be made on skis.)

Subject 3. Measuring Distances on a Map

Lesson 1. General explanation on map and scale; standard map scale and how to use it; and how to measure distances by use of a divider, reduced scale, available objects and eye-measurement on the map.

Lesson 2. (Only for artillery and mortar KUBUNDAE patrols) Cadence and its purpose and how to utilize it; how to measure the distance by cadence; map scale, its purpose and how to utilize it; and how to measure distance by using the scale on the map (plotting board).

Subject 4. Map Reading

Lesson 1. Signs, symbols, scale, and legend; coloring of maps; how to write down names on the map and how to indicate numerals; and how to read signs, symbols and legend, in other words, how to read the signs and symbols representing residential areas, roads, rivers, bridges, river crossing points, swamps, forests, shrubs and targets of defense.

Lesson 2. Forms of terrain, its typical form and its characteristic points and lines; general explanation on how to describe the forms of terrain and vertical height on the map; how to determine on the map the typical forms of terrain, their mutual relationship and the directions of slopes; and how to read on the map the signs and symbols representing valleys, cliffs, gaps, depressions, earth mounds and graves.

Lesson 3. (Only for reconnaissance troops belonging to artillery and mortar KUBUNDAE.) How to read the forms of terrain and how to read the route of advance. (Actual lessons will be given in the lecture-hall and outdoor)

Subject 5. Grid Coordinates

Lesson 1. General explanation of grid coordinate (kilometers) and how to utilize it in solving mission and artillery duties.

Lesson 2. The scale of coordinate, its purpose and how to utilize it; and the procedure and technique of determining the coordinate points on the map and how to express coordinates.

Lesson 3. Use of grid coordinate in indicating a target on a map, how coordinates are expressed and how to determine point from a given coordinate.

Lesson 4. How to determine and plot the firing angle and true bearing on the map with the aid of celluloid circular guide plate and angulameter.

VIII. Communication Training

A. Purpose of Training

For reconnissance troops belonging to artillery and mortar KUBUNDAE: To train soldiers with one year service how to utilize telephone set and to give them the general conceptions of wire communications. Actual radio transmission exercise will be given to seasoned soldiers.

For the seasoned soldiers belonging to the reconnaissance KUBUNDAE: General concept of short wave radios and ultra-short wave radios will be taught, and radio telephone operations will be taught also.

For the duty personnel belonging to the artillery and mortar KUBUNDAE: Use of telephone set and ultra-short wave apparatus will be taught, and a general explanation on how to string a short insulated telephone line will be given

For self-propelled gun crew members: Knowledge about construction of communication equipment will be imparted and the skill in radio telephone operation will be taught.

B. Instructions on Methods

The study of telephone set and the lesson in radio will be actually carried out by the use of telephone set and radios which are in operation. Training must be given to such extent that each soldier may independently connect and check telephone set, adjust radios and organize telephone communication.

During lessons, the high combat capacity of communication equipment and technical materials in our country must be emphasized.

The training in radio operations will be carried out in outdoor conditions of various areas.

Tank radio operations of the self-propelled gun crew members will be carried out by utilizing radio signal list, telephone communication list and MILMA* map.

Subjects and Allocation of Time

Subject Number	Title	Hours					
		Reconnaissance KUBUNDAE	Reconnaissance troops belonging to artillery and mortar KUBUNDAE	Duty personnel belonging to artillery and mortar KUBUNDAE	For special troops belonging to self-propelled gun KUBUNDAE		
					SP Gun commanding officer	Gun commander and loader	Driver
	First phase Veteran soldiers						
1	Short Wave Radio	4	4	-	-	-	-
2	Ultrashort Wave Radios	4	-	-	-	-	-
3	Telephone Operations of Short Wave and Ultra-Short Wave Radios	9	6	-	-	-	-
	Total	17	10				
	Second Phase All Soldiers						
4	Field Telephone Set and Regulations Governing Its Use	-	5	4	-	-	-
5	General Concept of Wire Communication	-	5	3	-	-	-
6	How to Destroy Enemy Communication Lines	-	2	-	-	-	-

Subjects and Allocation of Time, cont'd:

7	General Construction of Ultra Short Wave Radio and Regulations Governing Its Use	-	-	5	-	-	-
8	Operational Preparations of Radios and Tank Telephone Communication System (TPU)	-	-	-	8	6	2
9	Radio Interference and Its Prevention	-	-	-	4	-	-
10	Organization of Radio Communication and Regulations on Radio Communication	-	-	-	4	2	2
11	Radio Operations in the Platoon Radio Net	-	-	-	4	2	2
12	Radio Operations in the Artillery Battery Radio Net	-	-	-	6	4	2
	Total	-	12	12	26	14	8

First Phase

Subject 1. Short Wave Radios

Lesson 1. "Basic parts" of a radio and their purpose. Tactical and technical data on radio.

Lesson 2. Deployment of radios and operational preparations; how to adjust the receiver and transmitter to the designated wave length and how to adjust them to telephone operations; and regulations on the radio telephone operations.

Subject 2. Ultrashort Wave Radios

Lesson 1. Tactical and technical data on radio and general construction of radio.

Lesson 2. Deployment of radios and operational preparations; how to adjust to the designated wave length; and communication control.

Subject 3. Telephone Operations of Short Wave and Ultrashort Wave Radios

Selection of position for radio; deployment of radios and operational preparations; radio operations by network and channel; and how to use the radio signal list.

Deployment of radios in defiladed trenches, foxholes, entrenchment and other covered trenches; radio operations by the use of various antennas under various terrain; and drill in transmitting command and signal by radio.

Second Phase

Subject 4. Field Telephone Set and Regulations Governing Its Use

Lesson 1. Essentials of telephone communication; mission of field telephone set as well as tactical and technical data; basic parts of a telephone as well as their purpose; and regulations governing the utilization of telephone set.

Lesson 2. Inspection on the orderliness of radios; connection of single insulated telephone line and double insulated telephone line; and regulations on telephone conversation.

Subject 5. General Concept of Wire Communication

Reconnaissance Troops Belonging to Artillery and Mortar KUBUNDAE:

Lesson 1. To show various types of field communication lines which are used by the Korean People's Army; materials used in communication by foreign forces and how to detect their lines by the installation methods used.

Lesson 2. How to connect a telephone set to the telephone line without disrupting communication; and how to effect simple repair of communication line.

Duty Personnel Belonging to Artillery and Mortar KUBUNDAE:

Lesson 1. Structures of the insulated line and coil, and general explanations on tools used in installing insulated telephone lines; how to connect insulated telephone lines, and how to wind and unwind insulated telephone lines.

Lesson 2. Demonstrations of how communication troops install a short insulated telephone line; and general explanation on how to tie and string insulated lines in various kinds of terrain.

Subject 6. How to Destroy Enemy Communication Lines

How to detect enemy's insulated communication line; and how to destroy enemy's insulated communication lines and permanent communication lines by applying methods such as severing and grounding enemy's insulated lines and fixed communication lines, or by secretly severing and short circuiting enemy lines.

Subject 7. General Construction of Ultrashort Wave Radio and Regulations Governing its Use

Lesson 1. General concept of radio communications, tactical and technical data on radio; and general construction of radio.

Lesson 2. Selection of location of radio and its deployment, and its operational preparations; how to adjust the radio to the designated wave length; regulations on exchanging radio messages by telephone; and actual radio operations.

Subject 8. Operational Preparations of Radios and Tank Telephone Communication System (TPU)

Lesson 1. Procedure for inspecting radios and tank telephone communication system, and preparation for operation; special inspection of antenna and equipment; checking data and connection; and inspection of the radio and tank telephone communication system.

Lesson 2. How to adjust transmitter and receiver to the designated wave length; inspection of receiver operation; inspection on operation of telephone transmission; adjustment of receiver and transmitter by RYONG PIDU*; and inspection of the radio and tank telephone communication equipment.

Subject 9. Radio Interference and its Prevention

Atmospheric interference. How to minimize interference caused by radio stations operated on same or similar wave length, telegraphs, communication lines, industrial electric motors and group of tanks. Acoustic interference.

Subject 10. Organization of Radio Communication and Regulations on Radio Communication

Radio net and radio direction; radio data (wave length, call signs, code) and regulations on utilizing it; changing to new wave length and call signs; regulations on utilizing radio signs list, telephone conversation list and MILMA* map; and radio discipline and radio camouflage.

Subject 11. Radio Operations in the Platoon Radio Net

Lesson 1. Operational preparations of radios; procedure for exchanging radio messages over radio nets of the armored tank unit and mechanized unit; radio operations; call for establishing communication; answer to the call; and tuning.

Lesson 2. Receiving and dispatching orders, radio signals and radio telegrams; and radio operations during march.

Subject 12. Radio Operations in the Artillery Battery Radio Net

Lesson 1. Establishment of communication. Radio operation in the artillery company radio net; and receiving and dispatching orders, radio signals, instructions and reports.

Lesson 2. Questioning and assigning codes; counter-inspection of orders and instructions dispatched; TONGMUN* (TN Literally identical messages) transmission.

Lesson 3. How to operate while performing in the capacity of the main radio within the radio net; and using alternate wave length.

IX. Motor Vehicle Training

A. Purpose of Training

General explanation on the construction and purpose of motor vehicles, and training in vehicle serving will be given.

B. Instructions on Methods

Studies on general construction of motor vehicle will be carried out by conversational method and by showing the vehicle assembly(mechanism).

The instructor must concisely and clearly explain the purpose and general structure of the vehicle assembly (mechanism). The instructor must not explain in more detail than necessary on the individual parts and function.

Subject 2 (except Lesson 2) will be actual study of motor vehicle in the field.

Each soldier is required to take the whole course of automotive maintenance prescribed in this training program.

Subjects and Allocation of Time

Subject Number	Title	Hours
	Second Phase	
1	Mission of Motor Vehicles and Their Construction	7
2	Motor Pool Duty and Maintenance of Motor Vehicles	8
	Total	15

Second Phase

Subject 1. Mission of Motor Vehicles and Their Construction

Lesson 1. Motor vehicles in the Korean People's Army; their mission and application; tactical and technical characteristics of the motor vehicles and their general structure; and arrangement of the basic assemblies and auxiliary components.

Lesson 2. Engine construction; purpose; four stroke cycle gasoline engine; and general explanation on parts and functions of the various systems.

Lesson 3. Purpose of the transmission system; and general explanation on the function and construction of the clutch, gearshift lever, accelerator and rear axles.

Lesson 4. Purpose and general construction of the main drive system, loading platform and engine test stand.

Subject 2. Motor Pool Duty and Maintenance of Motor Vehicles

Lesson 1. Mission and type of motor pools; basic elements, mission and setup of motor pools; order of entering and leaving motor pool and interior order; maintenance of motor vehicles and inspection; daily servicing; inspection of vehicle on the road (during halt, during a short recess).

Lesson 2. Motor vehicles fuel - lubricating oil and the characteristics of coaled liquid; handling of gasoline, lubricating oil and anti-freeze in servicing motor vehicles.

Lesson 3. Motor vehicle parking; cleaning the interior of the loading platform and cab; motor vehicle washing; and cleaning of the engine.

Lesson 4. Inspection of coolant; how to drain coolant; changing lubricating oil; procedure for filling gasoline and lubricating oil; supply of tools and their use; how to start an engine with a starter; and assisting drivers whose motor vehicles are in trouble.

Lesson 5. Removing and replacing tires; tire tools; how to lift motor vehicles with a jack; disassembly of wheels; how to clean dirt and rust from the wheels; how to fix tires on the wheels; how to put air into tires; how to fix the wheels; and how to tighten nuts on the wheels.

X. Knowledge of Technical Equipment

A. Purpose of Study

To teach trainees the tactical-technical capabilities, combat characteristics and the basic combat use of battalion guns, regimental guns, mortars, medium grenade throwers and regimental self-propelled guns.

B. Instruction on Methods

KUBUNDAE must go to the firing range (artillery firing range). Therefore, various kinds of weapons must be readied at the firing range to facilitate the study. To each weapon (separately set up), an officer well-versed in the weapon will be assigned, and seasoned soldiers will man the weapons in accordance with the officer's instruction. These seasoned soldiers must know how to demonstrate skilfully and positively the actions necessary to operate the weapons in actual and dry run fire.

KUBUNDAE will form a circle around the various weapons by turns under the command of their commanding officers. The commanding officer in charge will inform the soldiers of the tactical-technical capabilities of the weapon, show them how the weapon is handled, and give necessary explanations. The study will end with demonstration firing of the weapons.

Subjects and Allocation of Time

Subject Number	Title	Hours
	First Phase	
	One-Year Soldiers	
1	Artillery, Mortar, Medium Grenade Discharger and Self-propelled Gun	8
	Total	8

First Phase

Subject 1. Artillery, Mortar, Medium Grenade Discharger and Self-Propelled Gun

The purpose, general structure and combat capabilities of battalion mortar, regimental mortar, battalion gun, regimental gun, medium grenade thrower and self-propelled guns; their places in the infantry combat order and the duties they will perform; demonstration of artillery fire in combat.

XI. Hygiene Training

A. Purpose of Training

To train soldiers to observe personal hygiene regulations, teach them how to give medical aid to themselves and to each other when injured or poisoned by gas, how to console each other in unhappy incident, and to teach them preventive measures against epidemics.

B. Instructions on Methods

Hygiene training will be conducted by the unit medical officer.

During lessons, study materials and visual aids will be utilized and methods will be demonstrated.

Problems such as giving first aid to the injured and the gassed will be studied on the field.

Subjects and Allocation of Time

Subject Number	Title	Hours
	First Phase	
	One-Year Soldiers	
1	Various Elements of Military Hygiene	1
2	Hygiene in Winter March	1
3	Epidemics and Preventive Measures	1
4	Skin Diseases, Venereal Diseases and Their Prevention	1
5	Giving of First Aid to Oneself and to Each Other When Gassed	1
6	Self-Supervision During Physical Training	1
	Total	6

First Phase

Subject 1. Various Elements of Military Hygiene

Significance of personal hygiene; washing hands and feet and care of hair and oral cavity; bathing and changing of underwear, hygiene on clothing, physical training and its significance in improving health; and hygiene requirements in the garrison regulations governing disposition of barracks.

Subject 2. Hygiene in Winter March

Preparations for road-march; how to secure drinking water; prevention against chilblain and bruises and first aid; and regulations on actions during minor break and major break.

Subject 3. Epidemics and Preventive Measures

General explanation on epidemics; principles of decontamination; preventive inoculation in the Korean People's Army; typhoid fever, influenza and tonsillitis; sources of contagion and diseases; and how epidemic spreads and how to prevent it.

Subject 4. Skin Disease, Venereal Diseases and Their Prevention

Suppuration of skin and hypodermic malady means prevention of rashes caused by food poisoning, inflammation and bruises. Preventive measures against the parasitic diseases of skin and hair and scabs; and fight against the venereal diseases.

Subject 5. Giving First Aid to Oneself and to Each Other When Gassed

First aid to oneself and to each other when exposed to viscatory gas.

Regulations on personal use of anti-chemical bucket; and first aid when gassed by asphyxiator, irritant and other chemical agents.

Subject 6. Self-Supervision During Physical Training

Purpose of soldiers' physical training; early morning exercise and its significance; warm-up exercise; organizational discipline; preservation of health and care when poisoned or injured; watching one's health from heart condition and shortness of breath.

Chapter 2. Tactical Training

A. Purpose of Training

1. To train one year soldiers to act voluntarily and skilfully among team personnel, among squad (gunners, crew) personnel and on the battlefield during defense and assault and in performing combat security duties.

2. To train seasoned soldiers the duties of patrol chief, double sentinel chief and listening post chief and in completing their individual training.

3. To train squad (gunners and crew) and platoon to perform flawlessly in assault, defense, reconnaissance. Cooperative actions within the combat formation and coordinated actions with the reinforced equipment and adjacent units must be perfected.

4. To carry out thoroughly the elementary combat training of a company (artillery battery).

B. Instructions on Methods

1. The first phase of the winter training period will be devoted to winter training, and the following must be sought.

a. Fresh recruits: Basic knowledge and skill in combat action necessary to one year soldiers.

b. Seasoned soldiers: Necessary supplementary knowledge and skill; guidance in collective action. After that, individual training on all lessons and practices will be conducted.

2. Individual training of a soldier (a group of soldiers) will be conducted by the squad leader on the field as a part of the squad (gunners, crew) training exercise. For each lesson, areas in which lessons can be most effectively carried out and in which planned subjects of study can be consciously mastered will be chosen and furnished. For example, in "using terrain to advance on the battlefield" it would facilitate matters to choose an area where soldiers can advance erect in the direction of enemy along covered approaches and then advance by leaping, creeping and rushing.

Lessons on seasoned soldiers' duties will be carried out under platoon leader and collective training methods concurrently with the actions to be carried out together with other combat personnel.

3. During individual training and squad (gunners, crew) training, the platoon leader will be responsible for the selection of the area of study, its installation and necessary equipment, (dummy, signs, model equipment). Therefore, a platoon leader must carry out his duties in such a manner as to ensure students thorough study in the assault technique, methods of overcoming obstacles, combat within the trenches, combat within the entrenchment and so forth.

4. During individual training, soldiers' patience, sharpness, wisdom, cunning and tenacity must be elevated in every way in the course of completing the prescribed training. Unless there is a real necessity, a leader's decision (method) must not be revealed to the men. Novel situation must be created and soldiers must be encouraged to carry out their action skilfully.

5. The training of a KUBUNDAE in the combat action covered will be carried out in the tactical column exercise directly under the KUBUNDAE commander.

During the tactical column exercise, each study problem must be thoroughly studied and mastered. For example, problems such as "assault," "squad action during assault," must be studied.

a. How promptly a squad springs out of a trench when the order "Charge!" is given; how to charge and advance while firing; and how to march through a passage within an obstacle.

b. How to charge and advance with a warcry; how to annihilate the enemy during march with hand grenades, fire power, bayonet and rifle butts; and how to march without rest.

Each action must be gone over several times until it is mastered. Later, actions relating to the problem of study must be repeated in the combined exercise.

Studies of tactical order will be carried out in a general form of study. The enemy may be indicated by either a small number of individual soldiers (team), dummy or signs, depending on the objective and scale of study.

Fire power (friendly fire power and enemy fire power) and barriers will be indicated by either land-mark or dummy equipment.

The KUBUNDAE will carry out the studies of tactical order among themselves. To study the methods of the cooperative action with the attached (supporting) reinforced equipment, the reinforced equipment will be indicated by mock-up.

6. During the training of self-propelled gun KUBUNDAE, studies will be carried out in a sandy place or the studies of tactical order will be conducted on the field by the "crew and tank" methods, if necessary, before the studies with equipment are commenced.

7. Training on cooperative action will be carried out beginning with the squads. For example, during the study of assault, soldiers and KUBUNDAE must work hard to master the following:

a. Assault the enemy fiercely with tanks.

b. To assault the enemy by surprise, the results of artillery fire, the blow dealt by tanks, actions of air units and the sucess won by adjacent units must be exploited without delay before the enemy regroups its troops.

Techniques of charging and advancing under direct artillery and mortar support, fire during march and the methods of mobility during defense in depth must be studied very carefully.

8. Tactical training must be organized and carried out under the methodical instructions suggested during the summer trainning.

I. Infantry KUBUNDAE

Subjects and Allocation of Time

Subject Number	Title	Hours
	First Phase	
	One-Year Soldiers	
1	Soldiers in Offense	22
2	Soldiers in Defense	11
	Total	33
	Seasoned Soldiers	
3	Patrol Leader's Duties During Reconnaissance and Guard	4
4	Double Sentinel Leader's Duty	3
5	Listening Post Leader's Duty	3
6	Platoons in an Independent Reconnaissance Patrol Unit	4
7	Platoon Action in an Assault Team	4
	Total	18
	Second Phase	
	All Soldiers	
8	Patrol's Duty During Reconnaissance and Guard	4
9	Double Sentinel Duty	4
10.	Listening Post Sentinel Duty During Night	3
11	Squads During Offensive Combat	12
12	Squads During Defense	12
13	Squads During Reconnaissance	6
14	Squads During Sentinel Duty	4
15	Platoons During Offense	16
16	Platoons During Defense	14
17	Platoons During Reconnaissance	8
18	Tactical Training in Conjunction with Combat Fire Exercise of the Subject "Platoons During Offense"	6
19	Reinforced Infantry Company March, and Attack on Enemy Who has Promptly Shifted to the Defense	12
20	Railway Transportation	6
21-22	Tactical Training of the General Arms	28
	Total	134

First Phase

Subject 1. Soldiers in Offense (Studies in tactical order)

Lesson 1. Advancing to the battle front by **utilising** the terrain; studies of the terrain, selection of road and route of advance; advancing by **leaping** and **creeping**; selection of firing ground, digging-in and camouflage; and how to overcome wire barriers by utilizing available equipment.

Lesson 2. Observation at the battle front; observation troops' duty; selection and establishment of observation post; signs which betray targets; and observation during halt and march.

Lesson 3. Night advance; how to select before dark targets which can be seen well at night; how to advance noiselessly; maintaining a given course; and actions to take when the terrain is illuminated.

Lesson 4. Preparation for charge and charge; occupation and camouflaging of the jump-off position for charge; preparation for charge; **observation** on the battle front; how to jump out of a trench; advancing by charging; overcoming of barriers; and how to annihilate the enemy by fire and hand-to-hand combat.

Lesson 5. Combat in trenches and communication trenches; how to jump into a trench and how to advance along a trench; removing and overcoming of "hedge-hog" barriers; and annihilation of enemy in trenches, communication trenches and covered trenches.

Lesson 6. Attack from defense in depth; how to advance by various methods while employing fire power; selection of the firing ground, digging-in, camouflaging and annihilation of targets which reveal themselves again; and repulsing enemy's counter-attack.

Lesson 7. Charging during night; how to study approaches to the objects of **charge** and enemy disposition areas before dark; how to advance stealthily to the jump off position for counteratteck; advancing by charging; actions to **take when the terrain is illuminated; and annihilation** of the enemy by hand-grenades, direct fire and hand-to-hand combat.

Lesson 8. Actions of liaison troops; duties of liaison troops; studies of route of advance; actions to take when confronted with the enemy and when injured; delivery of instructions and reports; how to return after performing a duty; and how to make a report to the commanding officer.

Lesson 9. Actions to be taken by **armor**; knowledge about the packing of ammunitions; safety measures when handling ammunitions; how to load ammunition belt and magazine with ammunitions; and supply of ammunitions to the KUBUNDAE.

Subject 2. Soldiers in Defense (Studies of tactical order)

Lesson 1. Preparations for **defense**, selection of firing ground; construction, outfitting and camouflaging of individual trenches for firing from the standing position; preparation for fire; and how to utilize surface configuration (shell craters, depression, mound and **fences**) for defense.

Lesson 2. Observation at the battle front; selection and outfitting of observation post; methods of observation; and reports on the results of observation.

Lesson 3. Repulsing enemy's surprise attack; actions to take during enemy's mortar fire and artillery fire; actions to take when the alarm is sounded; annihilating assaulting enemy tanks and infantry; cooperative actions with adjacent troops; and annihilation of the enemy penetrating into our trenches (communication trenches).

Lesson 4. Characteristics of night defense and observation; selection of observation ground; how to determine the nature and position of targets by the sound and flashes of guns; observation when the terrain is illuminated; firing weapon prepared for fire before dark; and annihilating enemy by indirect and direct fire.

Subject 3. Patrol Leader's Duties During Reconnaissance and Guard (Studies in tactics order)

Patrol chief's duty; order by which a patrol is to advance; and the patrol chief's position, observation during halt and march; organising observation of terrain and surface objects and the patrol chief's duty during observation; patrol chief's action when the enemy's engineer barrier and chemical barrier are discovered; patrol chief's action when confronted by the enemy; and maintenance of communication with the squad leader.

Subject 4. Double Sentinel Leader's Duty (Studies in tactics order)

Double sentinel chief's duty; double sentinel's advance and disposition; organization of observation in a designated area; double sentinel chief's action when lone enemy soldier appears and when an enemy group approaches; maintenance of communication with the commanding officer who dispatched the double sentinel; and the order by which double sentinels are to be replaced.

Subject 5. Listening Post Leader's Duty (Studies in tactics order)

Listening post chief's duty; advancing disposition and camouflaging of the listening post sentinel; organization of observation and listening; listening post chief's action when the enemy's individual soldiers and group are discovered; maintenance of communication with the commanding officer who dispatches the listening post sentinels; and actions to take during enemy attack.

Subject 6. Platoons in an Indenpendent Reconnaissance Patrol Unit (Training in tactics)

Studies of route of march; delivery of orders; order by which a patrol unit or a patrol advances; inspection of terrain and surface objects; observation reconnaissance; and actions to take when confronted by an enemy and with an area of barriers.

Subject 7. Platoon action in an Assault Team (Training in tactics)

Understanding of duty; targets of attack and attack, and studies of approaches to the targets; delivery of orders and organization of cooperative action; advance stealthily to the jump-off position; charging the assault crew's target; repulsing counterattack; and laying smoke screen.

Second Phase

Subject 8. Patrol's Duty During Reconnaissance and Guard. (Study in tactics order)

Lesson 1. Patrol actions during the daytime; patrol duty; advancing order; communication with the squad leaders; observation during march and halt; observation of terrain and surface objects; and actions to take when confronted with the enemy.

In addition, seasoned soldiers will be taught methods of determining the patrol chief's duty, marching route, bridges and other installations on the marching routes.

Lesson 2. Lesson 1 will be reviewed under night condition.

Subject 9. Double Sentinel Duty (Studies in tactics order)

Lesson 1. Duties of a double sentinel during the daytime; a double sentinel's duty; a double sentinel's advance and disposition; observation; a double sentinel's action when the enemy's individual soldier appears as well as when the enemy group approaches; and replacement of double sentinels.

In addition, seasoned soldiers shall be taught double sentinel's duty.

Lesson 2. Lesson 1 will be reviewed under the conditions of night.

Subject 10. Listening Post Sentinel Duty During Night (Studies on tactics order)

Listening post sentinel duty; observation and listening; listening post sentinel action when enemy's individual soldier and enemy's group are discovered and when the enemy launches a surprise attack; and action to take when the duty is completed.

In addition, veteran soldiers will be taught listening post sentinel chief's duty.

Subject 11. Squads During Offensive Combat (Lesson 1 - 4. Studies on tactics order.)

Lesson 1. Squad action during charge; occupation of jump-off position and its preparation; action to take during chemical attack; preparation for charge; charge; overcoming of barriers; annihilation of the enemy by fire and hand-to-hand combat; how to utilize situations favorable to a speedy advance; and repulsion of enemy's counter-charge.

Lesson 2. Squad combat in defense in depth; attack to be launched from the defense in depth; fire and coordination of actions during various movements for advance; overcoming barriers; advance to the enemy's flank; sudden charge against the enemy and its annihilation; and repulsion of counter-charge.

Lesson 3. Action of a squad which destroys the enemy in the trenches and in connecting trenches; penetration into the trenches; advance through trenches; and removal of the wire barriers and annhilation of the enemy by fire and hand-to-hand combat.

Lesson 4. Night attack and charge; how to study before dark the approaches to the enemy's dispositioned area and how to select targets which can be seen well during the night; stealthily advance to the jump-off position; actions when the terrain is illuminated; charging; and strengthening of the occupied point and surface object.

Lesson 5. (Training in tactics.) This training will be carried out during Lesson 1.

Subject 12. Squads During Defense (Lessons 1 - 3. Studies in tactics order.)

Lesson 1. Organization of defense; disposition of squads; improving of visibility and field of vision; organization of fire and coordination of fire with adjacent troops; construction of a squad trench; and security and constant combat readiness.

Seasoned soldiers will be trained in the method of organizing a trench and entrenchment.

Lesson 2. Repelling enemy attack and charge; observation on the battle field; squad actions to take during enemy artillery fire, aerial attack and chemical attack; repulsion of patrol action; annihilation of charging enemy tanks and infantry; and combat with enemy who has penetrated into the squad position.

Lesson 3. Characteristics of defense during night; preparation for firing weapon during night; illumination of the terrain; fire by a squad leader's order; and how to annihilate the assaulting enemy by direct fire and hand-to-hand combat.

Lesson 4. (Training in tactics). This training will be conducted in accordance with the contents of Lesson 2 including the subject of study, "squad command."

Subject 13. Squads During Reconnaissance (Studies in tactics order)

Lesson 1. Squads in the reconnaissance patrol unit; order by which a patrol unit or patrol advances; inspection of terrain and surface objects; actions to take when a contaminated area is discovered; and actions to take when confronted with the enemy.

In addition, seasoned soldiers will be trained in a patrol chief's duty.

Lesson 2. Squad action during ambush; disposition of ambush; observation on the enemy and the field; surprise assault on the enemy, how to capture prisoners, weapons and documents; and order of withdrawal after completion of mission.

Subject 14. Squads During Sentinel Duty. (Studies in tactics order)

Lesson 1. Sentinel post duty action during the daytime; disposition of sentinel; preparing and establishing combat position; disposition of double sentinel; organization of observation and execution of sentinel post duty; and actions to take during enemy charge.

In addition, seasoned soldiers will be trained in double sentinel chief's duty.

Lesson 2. Lesson 1 will be reviewed under conditions of night.

Subject 15. Platoons During Offense (Lessons 1 - 3. Studies in tactics order)

Lesson 1. Platoon action during charge; occupation and establishment of jump-off position for charging; preparation for charge; charge; overcoming barriers and contaminated area; and how to annihilate the enemy by using constant fire and blows and coordinated actions with the supporting and adjacent units.

Lesson 2. Platoon actions to take during enemy attack from its defense in depth; development of the offensive from the defense in depth; coordination of fire and advance; overcoming barriers; charging against the flank and rear of the enemy pill-boxes; how to utilize situations favorable for advance; and repulsion of enemy's counterattack.

Lesson 3. Attack and charge during the night; studies approaches to the targets and to the forward edge of the enemy defense; selection of target; stealthily advance to the jump-off position; actions to take when the terrain is illuminated; charging; strengthening of the zone captured from the enemy; and repulsion of the counterattack.

Lesson 4. (Training in tactics) Platoon actions and attack from defense in depth during charge against prepared defense positions; realization of the task and determination; delivery of combat order; organization of cooperative actions; charge; overcoming barriers; and cooperative action with the reinforced equipment during combat in defense in depth.

Subject 16. Platoons During Defense (Studies in tactics order)

Lesson 1. Preparation for defense; disposition of platoons during defense; establishing platoon position; organization of fire and coordinating fire with adjacent units; constant combat readiness; and preparation for firing weapon under the conditions of night and limited visibility.

In addition, seasoned soldiers will be taught how to draw up squad fire plan.

Lesson 2. The enemy's attack and repulsion of charge; the enemy's artillery and mortar fire; platoon actions during aerial attack and chemical attack; occupation of position on signal; platoon fire command during repulsion of charging tanks and infantry; annihilation of the enemy who either intruded into the platoon disposition area or penetrated into adjacent area; and participation in counterattack.

Subject 17. Platoons During Reconnaissance (Studies in tactics order)

Lesson 1. Platoons during search; preparations for platoon search; formation of combat order; studies on the object of search; advance to the jump-off position; order by which barriers are overcome; assault on the targets and capture of prisoners and documents; escorting prisoners; and order by which platoons are to return after completion of their mission.

In addition, seasoned soldiers will be taught the duties as superior of cadres who oversee the soldiers who in turn assault and capture the targets.

Lesson 2. Platoons during ambush; selection of ground for ambush; deploying troops for an ambush; observation of enemy and terrain; surprise assault on the enemy; how to capture prisoners, weapon and documents; and withdrawal after completion of mission.

Subject 18. Tactical Training in Conjunction with Combat Fire Exercise of the subject "Platoons During Offense."

Lesson 1. Realization of duty and determination; delivery of order; organizing cooperative actions; charge; platoon fire command during charge and during combat defense in depth; cooperative action with reinforced equipment; annihilation of the enemy pill-boxes from his defense in depth; and repelling enemy counterattack.

Subject 19. Reinforced Infantry Company March and Attack on the Enemy Who Promptly Shifted to the Defense.

Lesson 1 (Studies in tactical order); foot march of infantry company; preparation for marching; order of march and minor rest period; transmission of instructions to column; enemy's chemical attack; actions to take when attacked by enemies on the ground and in the air; combat deployment; and advancing in various ways from a combat formation.

Lesson 2. (Day and night tactical training without rest); reinforced infantry company march and attack on the enemy who had promptly shifted to the defense; organizing march and march security; reconnaissance while approaching enemy defense position; receiving combat mission, decision,

dissemination of order and organizing coordinated action; how to advance to the defense forward edge under cover of fire support; charge without pause; clearing barriers; and development of attack.

Subject 20. Railway Transportation (Studies in tactics order)

Disposition of troops at railways stations; how to entrain personnel and load equipment; enemy air raid during loading and action to take; duties of freight car personnel and of military train personnel; regulations governing soldiers' conduct in transit; and how to detrain personnel after arriving at the destination.

II. Reconnaissance KUBUNDAE

Subjects and Allocation of Time

Subject Number	Title	Hours
	First Phase	
	One-Year Soldiers	
1	Soldiers in Offense	212
2	Soldiers in Defense	11
	Total	33
	Seasoned Soldiers	
3	Senior Observation Soldiers' Duty at the Observation Post	6
4	Patrol Leader's Duties During Reconnaissance	6
	Total	12
	Second Phase	
	All Soldiers	
5	Organization, Armament, and Tactics of Units of Foreign Forces Under Study	12
6	Soldiers' Duties at the Observation Post	6
7	Patrol Duty During Reconnaissance	8
8	Double Sentinel Duty	3
9	Listening Post Sentinel's Duty During Night	3
10	Actions of Observation Post Personnel During Offense	4
11	Squads During Offense	8
12	Squad During Defense	8
13	Squads During Reconnaissance	14

Subject Number	Title	Hours
14	Platoons During Offense	8
15	Platoons During Defense	8
16	Platoons During Reconnaissance	22
17	Companies During Reconnaissance	8
	Tactical Training of the General Arms in Accordance with Subject 22 on Infantry KUBUNDAE and Participation in the Studies of Subject 20	22
	Total	134

First Phase

Subjects 1 and 2. The contents of these subjects are same as the contents of Subjects 1 and 2 of the infantry KUBUNDAE's tactical training.

Subject 3. Senior Observation Solder's Duty at the Observation Post (Studies in tactics order)

Receiving duties and understanding them; appointment of relief observation soldiers; selection establishing and camouflaging observation post; how to enter the results of observation in the observation log book and map (sketch map); report on the results of observation; replacement of the observation troops; organization of night operations at the observation post; and organization of recess at the observation post.

Subject 4. Patrol Leader's Duties During Reconnaissance (Studies in tactics order)

The contents are same as the contents of Subject 3 for infantry KUBUNDAE.

Second Phase

Subject 5. Organization Armament, and Tactics of Units of Foreign Forces Under Study.

Lesson 1. Organization of units; components of the infantry squad, infantry platoon, infantry company, tank platoon, tank company, armoured transportation vehicle platoon, artillery platoon, artillery company, self-propelled gun platoon and self-propelled gun company.

Lesson 21. Arms of an unit; infantry and artillery weapons and their data; types of tanks, self-propelled guns and armored transportation vehicles; their armament and tactical and technical data on them; and equipment of the engineer barriers and chemical barriers.

Lesson 3. Marching order and combat order; company and battalion marching orders; platoon, company and battalion combat orders; and platoon, company and battalion defense.

Lesson 4. Uniforms and insignia worn by soldiers, noncommissioned officers and officers belonging to the infantry unit, tank unit and artillery unit; markings on combat and transportation vehicles; and aircraft silhouettes.

Subject 6. Soldiers' Duties at the Observation Post (Studies in tactics order)

Lesson 1. Selection of site for an observation post and execution of observation duties; selecting the site and setting up observation post, study of the reference point and distance to that point; how to divide the designated observation area into sections; determining existence of enemy action and the nature of action by observation and listening; utilization of optical instruments during observation; and estimating enemy's preparation for chemical assault.

In addition, seasoned soldiers will be taught how to perform their senior's duty at the observation post and how to report to commanding officers.

Lesson 2. Maintenance of observation log-book; how to enter the results of observation in an observation log-book; reporting the results of observation; and the order by which observation troops are to be replaced.

Subject 7. Patrol Duty During Reconnaissance (Studies in tactics order)

Lesson 1. Patrol action during the daytime; patrol duty; order by which a patrol advances, and communications with squad leaders; observation during march and during halt; inspection of terrain and surface objects; patrol action when engineer barriers and chemical barriers are discovered; patrol action when confronted by the enemy; and how to report to squad leaders the results of inspection.

In addition, seasoned soldiers will be taught patrol leader's duty, condition of bridges on the route of advance and their load capacity.

Lesson 2. Patrol actions during reconnaissance of residential areas; approaching residential areas and general inspection from a distance; inspection of the houses; warehouses and other buildings, lying along the patrol's route of advance; clarification of the engineer's chemical barriers; their boundary lines and detours; how to interrogate local residents; how to make a report to the patrol leader on the results of inspection; and actions to take when the enemy is discovered.

In addition, seasoned soldiers will be taught patrol leader's duty.

Lesson 3. Patrol actions during the night; this will be carried out in accordance with the contents of Lesson 1.

Lesson 4 (will be carried out in an armored transport vehicle.) Armored transport vehicles are patrol vehicles to be used during marching reconnaissance; order of advance; inspection of terrain and surface objects; actions to take when confronted by the enemy; communications with the patrol unit; reporting on the results of observation and inspection.

The Contents of Subjects 8 and 9 are the same as Subjects 9 and 10, which are on tactical training of the infantry KUBUNDAE.

Subject 10. Actions of Observation Post Personnel During Offense (Studies in tactics order; to be carried out in armored transport vehicles.)

Understanding of duty; selection of route of advance; order by which a moving sentinel post will advance in the combat order of an assaulting KUBUNDAE; how to carry out observation on the enemy during march and

during halt; determination of azimuth during march and during halt and reporting on the results of the reconnaissance and on the determination of one's position.

Subject 11. Squads During Offense (Studies in tactics formation.)

The contents are same as Lessons 1 - 4 under Subject 11, Tactical Training of Infantry KUBUNDAE.

Subject 12. Squads During Defense

The contents are the same as Lessons 1 - 3 under Subject 12, Tactical Training of Infantry KUBUNDAE.

Subject 13. Squads During Reconnaissance

Lesson 1 (Studies in tactics formation; to be carried out in foot formation.) Squad action in the reconnaissance patrol unit during march; order by which a patrol unit and a patrol are to advance; reconnaissance of terrain and surface objects; actions to take when confronted by the enemy; and reconnaissance on the obstacles, barriers and contaminated areas.

In addition, seasoned soldiers will be tought patrol leader's duty.

Lesson 2 (Studies in tactics formation; to be carried out by armored transport vehicles.) Squad actions in a reconnaissance patrol unit (independent reconnaissance patrol unit) during offense; how to patrol through natural terrain obstacles, engineer's and chemical barriers, enemy's defense in depth (strong point) approaches to strong points and gap in enemy's defenses; how to penetrate into the enemy's rear by passing through the gap in enemy's defenses; how to detect enemy troop concentration; determining enemy's rest period; and report on the results of reconnaissance.

Seasoned soldiers will be trained in writing reports.

Lesson 3 (Training in tactics.) This training will be carried out in armored transport vehicles in accordance with the contents of Lesson 2.

Lesson 4. (Studies in tactics and formation will be carried out in foot formation. Squads during search; preparation for search; organizing the study and objects of search; how to set up passages through enemy wire barriers and mine field and how to overcome them; stealthily advance to the objects of search; squad action to take when the terrain is illuminated and during enemy fire; assaulting the targets; capture of prisoners and documents; search of prisoners and enemy dead for documents; order by which troops are to return after completion of mission; escorting prisoners; and evacuation of the wounded and the dead.

Lesson 5. (Training in tactics will be carried out in foot formation.) Problem of study. This study will be carried out in accordance with the contents of Lesson 4, including coordinated action with supporting fire.

Lesson 6. (Studies in tactics will be carried out in foot formation.) Squad action during ambush; selecting a site for ambush; advance to the site of ambush; planning reconnaissance of the enemy and terrain; squad disposition and camouflaging squad lying in ambush; how to surprise individual enemy officers and soldiers and take them prisoner; opening surprise fire on enemy group and its annihilation; capture of prisoners and documents; and withdrawal after the completion of mission.

Lesson 7 (Tactical training.) This exercise will be carried out in armored transport vehicles in accordance with the contents of Lesson 6.

Subject 14. Platoons During Offense (Studies in tactics formation.)

The contents are the same as the contents of Lessons 1 and 2 of Subject 15, tactical training of the infantry KUBUNDAE.

Subject 15. Platoons During Defense. (Studies in Tactics formation.)

The contents are the same as Subject 16, infantry KUBUNDAE's tactical training.

Subject 16. Platoons During Reconnaissance

Lesson 1. (Studies in tactics carried out in foot formation.) Armored transport vehicle platoon action in the independent reconnaissance patrol unit during march; study of marching route; preparation for platoon reconnaissance; advancing order; reconnaissance of terrain and surface objects; actions to take when engineer barriers and contaminated area are discovered; and actions to take when confronted by the enemy.

Lesson 2. (Tactical training.) Study problems; how to make reconnaissance report; report by means of radios and mobile communication equipment; this training will be carried out in armored transport vehicles in accordance with the contents of Lesson 1, including the method of transfer.

Lesson 3. (Studies in tactics carried out in foot formation.) Platoon action in an independent reconnaissance patrol unit when attacked from the enemy's defense in depth; order by which a patrol unit is to advance; the enemy's remaining strong point, strong point occupied by the enemy whose position is known, and its approaches; reconnaissance in no man's land and barriers; and advance to the flanks and rear of the enemy.

Lesson 4. (Tactical training.) Including study problems planned in accordance with Lesson 2; tactical training will be carried out in armored transport vehicles in accordance with the contents of Lesson 3.

Lesson 5. (Studies in tactics carried out in foot formation.) Platoon action during night search; preparation for search; studies of search area and objects of search; drawing the plans for action; opening passages through wire barriers and mine field and clearing these obstacles; stealthily advance to the objects of search; actions to take when the terrain is illuminated and during enemy fire; assaulting targets; capture of prisoners, documents and arms; search of prisoners and the dead for documents; how to return after completion of mission and how to escort prisoners; and evacuation of the wounded and the dead.

Subject 17. Companies During Reconnaissance (Studies in tactics carried out in armored transport vehicles.)

Lesson 1. Company action within a reconnaissance unit when not in direct contact with the enemy; how to dispatch a reconnaissance patrol and establish its mission; organizing local security for the main body of a reconnaissance unit; reconnaissance unit's advance; communication between the main strength of reconnaissance unit and reconnaissance patrol units; establishment of supplementary duties for the reconnaissance unit; reconnaissance unit action during reconnaissance of the enemy and terrain; and actions to take when confronted by the enemy and engineer chemical barriers.

Lesson 2. Company actions to be taken in a reconnaissance unit after penetrating into the enemy's main defense area; organization of local security and observation; dispatching of reconnaissance patrol unit and establishing its mission; reconnaissance of the flanks and adjacent point; how to search the area not included in the enemy's defense and how to invade into enemy dispositioned area; establishment of supplementary duties for the reconnaissance patrol units; reconnaissance of the retreating enemy; and command and communications in a reconnaissance patrol unit.

III. Company Machine Gun KUBUNDAE and Heavy Machine Gun KUBUNDAE

Subjects and Allocation of Time

Subject Number	Title	Hours	
		Company Machinegun	HMG
	First Phase		
	One-Year Soldiers		
1	Soldiers in Offense	22	22
2	Soldiers in Defense	11	11
	Total	33	33
	Second Phase		
	All Soldiers		
3	Machinegun Squad During Offense	10	10
4	Machinegun Squads During Defense	10	10
5	Machinegun Platoons During Offense	10	14
6	Machinegun Platoons During Defense	10	10
	Participation in Tactical Training of Infantry Platoon Combined with Combat Fire Training Relating to Subject "Platoons in Offense"	6	6
	Participation in Tactical Training of General Arms Relating to Subject 19	12	8*
	Participation in Tactical Training of General Arms Relating to Subjects 21 and 22 As Well As Participation in the Studies on Infantry KUBUNDAE, Subject 20	34	34
	Total	92	92

*Heavy machine gun KUBUNDAE will participate only in Lesson 2 in accordance with Subject 19.

First Phase

The contents of Subjects 1 and 2 are same as Subjects 1 and 2, tactical training of an infantry KUBUNDAE.

Second Phase

Subject 3. Machine Gun Squad During Offense (Studies in tactical formation.)

Lesson 1. Squad action during charge; preparation and occupation of firing position; reconnaissance of the enemy and terrain in the direction of charge; actions to take during enemy chemical attack; preparing fire data; preassault fire; squad action after the infantry KUBUNDAE advance by charging passage through obstacles; and how to render constant fire support to an infantry KUBUNDAE charge.

Lesson 2. Squad offensive from the defense in depth; how to secure by fire the gain made by infantry KUBUNDAE attack; replacement of firing positions; passage through obstacles; and strengthening of the occupied point and repulsion of counterattack.

Lesson 3. Characteristics of actions during attack and charge at night; preparing position and machine guns for fire; order by which firing is conducted and advance in the combat order of an infantry KUBUNDAE launching an attack; passage through barriers and contaminated area; establishment of firing positions in an area captured from the enemy; and repulsion of the counterattack.

Lesson 4. Characteristics of action during an attack on residential area; selection of firing position for conducting fire through gaps between buildings, walls and fence and at a road intersection of a city; how to support infantry KUBUNDAE charging against (assaulting) buildings; and repulsion of enemy counterattack.

Subject 4. Machine Gun Squad During Defense. (Studies in tactical formation.)

Lesson 1. Preparation for defense; organizing observation; increasing field of vision and firing range; reconnaissance of the enemy and terrain within the firing area; establishment of firing position; and preparing fire data suitable to the assigned mission.

In addition, seasoned soldiers will be taught how to set up a trench and how to draft a fire plan.

Lesson 2. Repulsion of enemy offensive and charge; squad actions during preparatory artillery fire; during aerial assault and during enemy fire assault; squad action after combat preparation and after the enemy has begun a charge; annihilation of the enemy who has penetrated into our defense positions; and supporting a counterattack.

Lesson 3. Characteristics of night defense of a squad; preparing machine guns and positions for firing mission; firing procedure; direct fire; repelling enemy charge by direct fire, when the area is illuminated; and how to displace firing positions before daybreak.

Subject 5. Machine Gun Platoons During Offense (Studies in tactical formation.)

Lesson 1. Platoon action during charge; preparing and occupying platoon fire position; actions to take during an enemy chemical attack; reconnaissance of the enemy and terrain and conduct of fire; preparation data; execution of fire mission during preparation for charge; and how to render constant fire support to the charge launched by the infantry KUBUNDAE.

Lesson 2. Platoon action during attack from defense in depth; how to secure by fire the attack of infantry KUBUNDAE; displacing firing positions under the protection of smoke screen; and strengthening of the occupied point and repulsion of enemy counterattack.

Lesson 3. Characteristics of night attack and charge; preparing firing position and machineguns to conduct fire; procedures for conducting fire; advancing from within the combat formation of an assaulting infantry KUBUNDAE; overcoming barriers and contaminated sectors; establishing fire positions in enemy occupied area; and repelling counterattack.

Lesson 4. Action of a platoon supporting an infantry KUBUNDAE attacking an enemy who had promptly shifted to the defense; deploying into combat formation; how to support by fire the infantry KUBUNDAE advance to the enemy's defense forward edge; and how to support by fire a sustained charge.

Note: This lesson will be carried out only for heavy machine-gunners. Displacement of firing positions; and how to support the advance of an infantry KUBUNDAE during attack from the defense in depth.

Subject 6. Machinegun Platoons During Defense. (Studies in tactical order)

Lesson 1. Preparation for defense; organizing observation; occupation of platoon fire positions; study of the terrain within the firing zone; establishing a mission for a squad; organization of coordinating fire with adjacent units; and preparation for firing a machinegun at night.

Lesson 2. Repelling enemy night attack and charge; combat preparation and platoon action after the launching of an attack by the enemy; conduct of fire under condition of enemy chemical attack; annihilation of the enemy who penetrated into our defense position; and supporting the counterattack of an infantry KUBUNDAE.

IV. Antiaircraft Machinegun KUBUNDAE

Subjects and Allocation Time.

Subject Number	Title	Hour
	First Phase	
	One-Year Soldiers	
1	Soldiers in Offense	22
2	Soldiers in Defense	11
	Total	33
	Second Phase	
	All Soldiers	
3	General Principles of Aircraft	8
4	Aerial Observation and Aircraft Insignia	8
5	Squads During Offense	8
6	Squads During March	6
7	Squads During Defense	10
8	Platoons During Offense	10
9	Platoons During March	6
10	Platoons During Defense	10
	Participation in Tactical Training of General Arms on Subjects 21 and 22 and Participation in the Studies of Subject 20, Infantry KUBUNDAE.	34
	Total	100

First Phase

Subjects 1 and 2. The contents are same as Subject 1, on tactical training of infantry KUBUNDAE.

Second Phase

Subject 3. General Principles of aircraft

Lesson 1. Characteristics of the Korean People's Army aircraft, and silhouettes, speed, attitude, armament, and insignia.

Lesson 2. Characteristics of foreign aircraft, basic silhouettes, speed, altitude, armament, insignia and markings.

Subject 4. Aerial Observation and Aircraft Insignia.

Observation soldiers' duties; search of planes with and without binoculars; structural characteristics; identifying planes by their insignias and sound; measuring angle by instruments.

Subject 5. Squads During Offense

Lesson 1 (Studies in tactical formation.) Squad action during preparation for attack; occupation of antiaircraft position and its establishment; aerial observation; and preparing machine guns and antiaircraft fire data.

Lesson 2. (Studies in tactical formation.) Repelling enemy aerial assault from the jump-off position, aerial observation; actions to be taken by personnel during enemy aerial attack; conducting of fire against aerial targets; and actions to take under enemy chemical assault.

Lesson 3. (Studies in tactical formation.) Squad actions to take during charge and during attack from the defense in depth; movement of platoon personnel after launching a charge; reconnaissance on the route of advance and on the next fire position; prompt combat preparation at the new firing position; repelling enemy aerial attack during charge and during combat from the defense in depth.

Lesson 4. (Tactical training.) This will be carried out in accordance with the contents of Lessons 1, 2 and 3.

Subject 6. Squads During March (Studies in tactical formation.)

Preparing equipment for marching; aerial observation; actions to take during a short rest period; repelling enemy aerial attack; and actions to take during an enemy chemical assault.

Subject 7. Squads During Defense (Studies in tactical formation.)

Lesson 1. Preparation for defense; occupation of antiaircraft position and its establishment; aerial observation; machineguns preparation and fire data on aerial targets; and organization of self-defense.

In addition, seasoned soldiers will be trained in the drawing of fire plans.

Lesson 2. Squad actions during combat; actions to be taken by personnel during an enemy aerial attack; conducting firing against aerial targets; actions to take under chemical attack; and combat with enemy ground units who penetrated into our defense position.

Subject 8. Platoons During Offense (Studies in tactical formation)

Lesson 1. Platoon action during preparation for offense; advance to the area of fire position; fire position installation and camouflage; aerial observation; and how to prepare machineguns and anti-aircraft fire data.

Lesson 2. Repelling enemy aerial attack from the jump-off position; aerial observation; platoon action during an enemy air raid; conducting firing against aerial targets; actions to take under chemical assault; and estimating the damages sustained in the enemy air raid.

Lesson 3. Platoon actions during charge and during combat in the defense in depth; order of moving simultaneously with the charge; reconnaissance of the route of advance and for the next firing position; prompt combat preparation at the new firing position; repelling enemy aerial attack during charge and during combat in the defense in depth; and repelling enemy counterattack.

Subject 9. Platoons During March

Lesson 1 (Studies in tactical formation.) Order of march as a part of a column; and platoon actions which will ensure antiaircraft defense of a column during advance, during halt, during minor rest period and during passage through a defile.

Lesson 2. (Tactical training) This will be carried out in accordance with the contents of Lesson 1.

Subject 10. Platoons During Defense

Lesson 1. Platoon action during organizing of defense; reconnaissance for and installations of antiaircraft position; aerial observation; reconnaissance for and installations of antiaircraft position; aerial observation; preparing machineguns and antiaircraft fire data; organizing firing and self-defense.

Lesson 2. Repelling enemy planes; platoon action during air raid; firing at aerial targets and fire correction; actions to take under chemical attack; replacement of the fire positions; and estimation of the results of attack.

Lesson 3. (Tactical training.) This will be carried out in accordance with the contents of Lessons 1 and 2.

V. Artillery and Mortar KUBUNDAE

Subjects and Allocation of Time

Subject Number	Title	Hours: Patrol	Hours: Signal troop	Hours: Orderly
	First Phase			
	One-Year Soldiers			
1	Soldiers in Offense	12	12	12
2	Soldiers in Defense	8	8	8
	Total	20	20	20
	Seasoned Soldiers			
3	Senior Reconnaissance Patrol's Activities at the Observation Post During Offense	12	-	-
4	Senior Reconnaissance Patrol's Activities During Defense	8	-	-
	Total	20	-	-
	Second Phase			
	All Soldiers			
5	Observation Reconnaissance Patrol Duty at the Observation Post	24	-	-
6	Reconnaissance Patrol's Action in the Artillery Reconnaissance Unit	16	-	-
7	Artillery (Mortar) During Offense	-	-	16
8	Artillery (Mortar) During Defense	-	-	14
9	Base Squad of the Artillery Battery (Mortar Company) During Offense	12	12	-
10	Base Squad of the Artillery Battery (Mortar Company) During Defense	8	8	-
11	Heavy Weapons Platoon (Mortar Platoon) During Offense	-	-	10
12	Actions of the Heavy Weapons Platoon (Mortar Platoon) in the Assault Team			4
13	Heavy Weapons Platoon (Mortar Platoon) During Defense	-	-	10
14	Artillery Battery (Mortar Company) During March and During Offense Against an Enemy That Has Swiftly Switched to Defense	8	8	8

Subject Number	Title	Hours		
		Patrol	Signal troop	Orderly
	Participation of the Heavy Weapons Platoon (Mortar Platoon) in Tactical Training of Infantry Platoon in Conjunction with Combat Fire Exercise			6*
	Participation in Tactical Training of Ordinary Arms Laid Down in Subjects 19, 21 and 22 and as in Studies of Subject 20 of Infantry KUBUNDAE	42	42	42
	Total	110	70	1100

Remarks: All the study subject are on tactical formation.

*120-mm mortar KUBUNDAE will not take part in the maneuver. The time will be allotted for studying Subjects 11 and 13.

First Phase

Subjects 1 and 2. The contents are the same as Lessons 1, 4, 6 and 8 of Subject 8, on tactical training of infantry KUBUNDAE, and Lessons 1 and 3 of Subject 2.

Subject 3. Senior Reconnaissance Patrol's Activities at the Observation Post During Offense.

Lesson 1. Senior reconnaissance patrol's activities at the commanding officer's observation post; reconnaissance patrol's duty at the observation post; disposition of the observation troops; installation of equipment and organization of observation; conducting of observation; writing reconnaissance report for the artillery company (mortar company); and procedure for changing observation posts.

Lesson 2. Senior reconnaissance patrol's operations at the forward observation post; understanding of duties; occupaion of the observation post and its installation; studies of the terrain within the observation area; organizing the observation in a designated area or individual targets; observation of activities and situation of the friendly forces; observation on the targets; correction of fire and report on the results of reconnaissance.

Lesson 3. Senior reconnaissance patrol's operations at the flank observation post; understanding of duties; selection of observation post; occupation of observation post and installation; organizing observation of infantry KUBUNDAE, on the basis of observation of the enemy occupied hill and the reverse slope; indication of target and correction of fire; and reconnaissance report on enemy and friendly forces situations.

Subject 4. Senior Reconnaissance Patrol's Activities During Defense

Lesson 1. Location of hostile artillery and mortar by analysis; observation of impact area and the nature of explosion; examining a sector of fire; shell craters; how to determine size of shells from shells fragments and duds; safety measure; and locating hostile artillery positions through crater analysis.

Lesson 2. Operations of the artillery reconnaissance patrol as a part of the infantry reconnaissance team; understanding of duties; studies of enemy's disposition area; penetration into the enemy's disposition area; reconnaissance of enemy's main line of resistance and important targets located in the depth and nearest to the main line of resistance; entering the targets on the map (rough sketch) and how to present reconnaissance report to the commanding officer upon return.

Second Phase

Subject 5. Observation Reconnaissance Patrol's Duty at the Observation Post

Lesson 1. Reconnaissance patrol's activities during selection of observation post; types and mission of observation posts; requirements which rise in the observation post; selection of observation posts; and advance to the observation post and disposition in that place.

Lesson 2. Conduct of reconnaissance at the observation post; studies of azimuth and terrain symbols; azimuth targets; rough sketches of the azimuth targets and how they are used; targets of reconnaissance and the area of reconnaissance; and reconnaissance procedure and study of terrain in the area of reconnaissance.

In addition, seasoned soldiers will be taught senior reconnaissance patrol's duty for organizing work at the observation post.

Lesson 3. Determining the nature of a target by the signs revealed; estimating the distance to the target (by eye-measurement, computation and azimuth target); observing the action of friendly forces; report on the target patrolled; and how to make an entry in the reconnaissance logbook.

Lesson 4. Duties of the observation reconnaissance patrol on duty; order by which observation reconnaissance patrols are to be replaced; organizing security at the observation post; and purpose of warning signals.

Lesson 5. Observer patrol's night activities; preparation for observation, and organizational activities; reconnaissance of the enemy and his fire equipment; plotting target by sound; and how to estimate the direction and distance of the target by gun flash and other signs.

Lesson 6. Reconnaissance patrol's operations during the selection of fire positions; types of fire positions; demands which rise in the fire position; selection of fire position; selection of azimuth target and sighting point; and selection of places for tractor equipment.

In addition, seasoned soldiers will be taught how to determine the depth of shelter for covered fire positions and the minimum rear sight setting.

Subject 6. Reconnaissance Patrol's Action in the Artillery Reconnaissance Unit

Lesson 1. Reconnaissance patrol's activities in road reconnaissance unit; mission of the reconnaissance unit; unit members and points of departure; missions of the reconnaissance unit; how to determine a road's traffic capacity and its suitability as a secret route of advance; how to examine bridges, river crossing sites, swamps and other areas difficult to pass; how to clear the rubbles and small obstacles from the route of advance; reconnaissance of contaminated area; search for ford and detour, and how to mark them; and operations at the traffic control post.

In addition, seasoned soldiers will be taught how to judge a bridge's quality, construction standard and vulnerable points and how to estimate their load capacity.

Lesson 2. Reconnaissance patrol's activities as a part of the forward reconnaissance unit; members of the reconnaissance patrol unit; points of departure and order of advance; determining the lines along which ob-

servation posts and fire positions are to be set up; reconnaissance of the enemy; communications with the leader of the advanced guard; action during advance in accordance with the security measure for marching; and reconnaissance report.

In addition, seasoned soldiers will be taught how to select observation posts and fire positions, how to send reports, and the role of reconnaissance patrol as guide.

Lesson 3. Reconnaissance patrol's activities as part of the command reconnaissance unit; mission of the reconnaissance unit, members and duty; location of the reconnaissance unit and marching order; and reconnaissance patrol's duty as a part of the command reconnaissance unit.

In addition, seasoned soldiers will be taught reconnaissance squad leader's activities in the command reconnaissance unit.

Lesson 4. Reconnaissance patrol's activities as part of the fire reconnaissance unit; mission of fire reconnaissance unit; members and duties; and reconnaissance patrol's mission during the operations of the fire reconnaissance unit at the fire position.

In addition, seasoned soldiers will be taught how to determine the depth of shelter for fire positions and the minimum rear sight setting and how to select covered sites for prime movers and covered approaches to the fire positions.

Subject 7. Artillery (Mortar) During Offense

Lesson 1. Flat trajectory gun prior to an offensive; gun emplacement; (Mortar KUBUNDAE will not study Lesson 1.)

How to select and set up concealments for guns and prime movers; preparing firing data; how to pull out guns to their emplacements; delivering demolition and annihilating (suppressing) fire to prepare for infantry charge.

Lesson 2. Artillery support during charge and during offensive from the defense in depth; location of the artillery (mortar) in the combat order of the infantry KUBUNDAE when launching a charge; and observation of action of the enemy and infantry KUBUNDAE.

Order of march and procedure of fire during charge and during combat in the defense in depth; overcoming of obstacles an contaminated area; and repelling enemy counterattack.

Lesson 3. Artillery support during offensive combat at night; understanding of the signals indicating one's KUBUNDAE and the signals for cooperative action; occupation of the fire position and its installation; preparations for artillery (mortar) and firing data; fire support of a charge; advance to the area wrested from the enemy and setting up of fire position; and repelling enemy counterattack.

Lesson 4. Actions to take during attack on residential area; reconnaissance of enemy terrain and buildings; selection of fire position; installation and camouflage; utilizing various buildings to conceal movements; conduct firing; changing firing position under the protection of smoke-screen; movement in residential area; and repelling enemy counterattacks.

Subject 8. Artillery (Mortar) during Defense

Lesson 1. Actions to be taken by artillery (mortar) units when organizing defense; occupation of fire position and its preparation; seeing through camouflages; identification; coordinated fire strong points; determination of target by azimuth within the firing area and determination of distance thereto and rear sight setting; preparation of fire data; and understanding the antitank plan.

Seasoned soldiers will be given additional training in selection of fire position, azimuth target, and formulating antitank fire plans.

Lesson 2. Repulsion of enemy attacks and charges; actions to be taken by the artillery (mortar) when the enemy prepares to fire its artillery, during air attacks, and during chemical attacks; annihilation of assaulting enemy tanks, infantry, and its fire power; annihilation of enemy elements that penetrate into our defense area; changing fire positions; and supporting the counterattack.

Lesson 3. Artillery (mortar) action during defense at night; preparing to fire and preparing fire positions; preparing fire data; guarding fire positions; and repulsion of the enemy charge.

Lesson 4. Actions to be taken by roving guns (mortars); studying and understanding the roving gun (mortar) action plan; reconnaissance of march route; reconnaissance of the fire position and approaches to the fire position; occupation of fire position; actions to be taken by gunners during fire; moving to a new fire position; and how to return to the original fire position after completing the mission.

Subject 9. Base Squad of the Artillery Battery (Mortar Company) during Offense

Lesson 1. Moving to the observation post from the jump-off position; installation and camouflage; disposition of personnel and equipment; and organization of observation and communication.

Seasoned soldiers will receive additional training on how to select and set up observation posts.

Lesson 2. Determining azimuth for basic direction; selection of azimuth target; making rough sketches of azimuth target; and guard duty.

Seasoned soldiers will receive extra training in PULGASIA's* method of making rough sketches.

Lesson 3. Base squad action in the preparatory period preceding the firing; observation of enemy action; making entries in the reconnaissance log book; indication of target; and actions of radio operators and telephone operators during transmission of data.

Seasoned soldiers will be given extra training on senior reconnaissance patrol (senior radio operator, senior telephone operator) duties and how to fill out the target log book.

Lesson 4. Base squad action during assault and combat in the enemy's defense in depth; observation of the actions of the enemy and friendly infantry; locating enemy positions obstructing the advance of infantry and tanks; indication of target; preparing fire data; changing observation posts as combat progresses; installing communication lines under enemy fire; and reconnaissance of the enemy from the new observation post.

Seasoned soldiers will receive additional training in base squad leader's actions relating to reconnaissance and communication in combat.

Subject 10. Base Squad of the Artillery Battery (Mortar Company) during Defense

Lesson 1. Base squad action during the organization of defense; occupation of the observation post; installation and camouflage; organization of observation, communication, and identification; installation of the communication line and deployment of radios; reconnaissance and making entries in the reconnaissance log book; and actions of reconnaissance patrol and communication personnel during the preparation proceeding fire.

Seasoned soldiers will be given additional training in senior reconnaissance patrol (senior radio communication soldier, senior telephone operator) duties.

Lesson 2. Base squad action during the repulsion of the enemy charge; duties of reconnaissance patrol and telephone operators during fire; actions to be taken during enemy artillery fire, during aerial assault and during chemical assault; moving to the alternate observation post; how to secure uninterrupted communication while changing observation posts and fire position; and defense measures.

Subject 11. Heavy Weapons Platoon (Mortar Platoon) during Offense

Lesson 1. Actions of the entire platoon during artillery fire; advance to fire position; installation and camouflage of fire position; issuing orders; signal for coordinated action; understanding of signals for commencing and ceasing fire; preparing to conduct artillery (mortar) fire; and preparing fire data.

Lesson 2. Period of the enemy's artillery preparation; platoon action during charge and combat deep in our defenses; execution of the firing mission during the period of enemy artillery preparation fire; how to give constant support to the infantry by means of fire power and vehicular transport service as the charge is launched; observing the enemy's firing positions and their annihilation during a momentary halt in the march; overcoming barriers and contaminated areas; and repulsion of the enemy infantry and tank counterattack.

Lesson 3. Nature of platoon action during a night attack against enemy defenses; reconnaissance of the enemy and its fire power; preparing illuminating equipment and signal equipment; reconnaissance of the march route before dark; guard; preparing fire data; and changing fire positions.

Subject 12. Actions of the Heavy Weapons Platoon (Mortar Platoon) in the Assault Team

Study of the terrain in the direction of the assault; understanding the mission; understanding the signals for coordinated action and signals used in indicating targets; occupation of the fire position, its preparation and camouflage; preparing ammunition; preparing fire data; how to secure by fire the advance of the assault teams to the jump-off positions; harassing and suppressing fire; and repulsion of the counterattack by the enemy's counter-envelopment force.

Subject 13. Heavy Weapons Platoon (Mortar Platoon) during Defense

Lesson 1. Preparing for action; selecting and preparing fire positions; study of terrain and azimuth target within the sector of fire;

organization of observation as well as preparation for conducting fire; establishment of coordination between the infantry squads located near the heavy weapon platoons and adjacent fire-support elements.

Seasoned soldiers will be taught how to draw up the antitank firing plan (understanding of the mortar platoon fire plan required).

Lesson 2. Repulsion of the enemy charge; enemy infantry elements that located are in the far adjacent area and in front of the defense forward edge; how to annihilate tanks and fire positions; actions to be taken during enemy chemical assault; engaging enemy tanks and infantry that penetrated into our defense area; and supporting the infantry squad counterattack.

Lesson 3. Characteristics of night defense; preparing fire positions; ensuring the platoon's combat readiness; illuminated targets; firing on unilluminated targets and by sound and gun flashes; order of fire; actions of gunners; repulsion of the enemy charge; and changing fire positions before daylight.

Subject 14. Artillery Battery (Mortar Company) during March and during Offense against an Enemy that has Swiftly Switched to Defense

Note: Battalion artillery KUBUNDAE will study the subjects in platoon components.

Lesson 1. Preparing for march; location of the artillery company (mortar company) in the march column; observation and warning during march; antitank defense during march; measures for antiaircraft and antichemical defense; deployment of the artillery company (mortar company) in march to repulse a sudden enemy charge; and how to support the deployment of an infantry KUBUNDAE.

Lesson 2. How to let an artillery company (mortar company) deploy into a combat order; preparing fire data; how to secure by fire the advance of infantry KUBUNDAE to the forward edge of the enemy defense zone; and how to render fire and transport support to infantry and tank when launching a sweeping all-out charge and when fighting among the enemy deployed in depth.

VI. Self-Propelled Gun KUBUNDAE

Subjects and Allocation of Time

Subject Number	Title	Hours	Motor/Hour Consumption Per Crew Member
	First Phase		
1	Actions of Crew Members during Self-Propelled Gun Combat Preparations	4	-
2	Self-Propelled Gun during Offense	10	1
3	Self-Propelled Gun during Defense	10	1
	Total	24	2
	Second Phase		
4	Self-Propelled Gun Platoon during Offense	8	2

Subjects and Allocation of Time (Cont'd)

Subject Number	Title	Hours	Motor/Hour Consumption Per Crew Member
5	Self-Propelled Gun Platoon during Defense	8	1
	Participation in Infantry Platoon Tactical Manuever Combining Combat Fire in the Subject, "Platoon during Offense"	6	2
	General Tactical Manuever on Subjects 21 and 22 of the Infantry KUBUNDAE and Participation in the Study of Subject 20	34	10
	Total	56	15
	Grand Total	80	17

First Phase

Subject 1. Actions of Crew during Self-Propelled Gun Combat Preparations

Spot check of self-propelled guns; supply of self-propelled gun ammunition; weapons; pre-fire preparation of sight and fixed turret; readying communication equipment; inspection of chemical defense equipment and its combat preparation; and how to report to the self-propelled gun commander on combat preparations.

Subject 2. Self-Propelled Gun during Offense (Studies on Tactics — Formation)

Lesson 1. Actions of self-propelled gun in support of infantry charge; reconnaissance of the enemy and terrain in the direction of charge; preparing fire positions; advancing to fire positions; how to render constant fire support to the infantry in assault.

Lesson 2. Actions of the self-propelled gun supporting the infantry during combat in the enemy's defense in depth; how to secure the infantry offensive in the enemy's defense in depth by breaking through to and destroying pillboxes obstructing the infantry advance; repulsion of the enemy counterattacks; and actions to be taken when suffering loss or depletion of ammunition and fuel.

Lesson 3. Self-propelled gun action during attack on a residential area, during reconnaissance of the enemy's fire power, during preparation of enemy's firing position, during charge, during the infantry advance in combat order; during suppression and annihilation of the enemy's fire power and man-power; and during repulsion of counterattacks by enemy infantry and tanks.

Subject 3. Self-Propelled Gun during Defense (Studies on Tactics — Formation)

Lesson 1. Self-propelled gun action in a strong point; advancing the self-propelled gun to the battery defense area and preparing firing positions; fire coordination in unit as well as with adjacent elements;

drawing up the firing plan; repulsion of enemy infantry and tank charge; and changing firing positions during combat.

Lesson 2. How to operate self-propelled guns as roving guns; studying the roving gun plan; reconnaissance of the march route and firing positions; preparation of fire data for each firing position; firing; changing firing positions; and report on the return trip to the basic firing position and on the performance of duty.

Second Phase

Subject 4. Self-Propelled Gun Platoon during Offense

Lesson 1. (Tactic and formation training) Action of the platoon to support the infantry when the latter launches a charge against prepared enemy positions; reconnaissance of the enemy and terrain in the direction of charge; preparing firing positions and fire data; advancing to firing positions and how to give fire support to the infantry in attack; constant support of infantry charge; suppression and annihilation of enemy pillboxes and repulsion of counterattacks by enemy tanks.

Lesson 2. (Tactic and formation training) Actions of the platoon to support the infantry during combat in the enemy's defense in depth; how to ensure the steady advance of the infantry in the enemy's defense in depth; suppression and annihilation of the enemy's fire power; overcoming engineer and chemical barriers; repulsion of enemy tank and infantry counterattack; and how to utilize smoke-screens for evacuating damaged self-propelled guns from the battlefield.

Lesson 3. (Tactical training) This training will be carried out with equipment, and it will be based on Lessons 1 and 2.

Subject 5. Self-Propelled Gun Platoon during Defense

Lesson 1. (Tactic and formation training) Platoon action to be taken at the strong point; advancing to the company defense area and installing firing positions; coordinated fire action between the self-propelled gun and adjacent antitank elements; repulsion of enemy tank and self-propelled gun charge; advancing to preparatory fire positions and annihilating enemy tanks and self-propelled guns which appear the company defense area; how to support the counterattack to be launched by the infantry KUBUNDAE; and platoon action to be taken during enemy chemical attacks and during decontamination.

Lesson 2. (Tactical training) Platoon action during ambush; selection, preparation, and occupation of firing position; establishing observation and preparing fire data; drawing up the firing plan; directing simultaneous fire on the enemy; and advance of the platoon to preparatory firing positions.

VII. Engineer KUBUNDAE, Signal KUBUNDAE, Chemical Defense KUBUNDAE, and Security KUBUNDAE

Subjects and Allocation of Time

Subject Number	Title	Hours	
		Engineer KUBUNDAE, Chemical Defense KUBUNDAE and Communication KUBUNDAE	Security KUBUNDAE
	First Phase		
	One-Year Soldiers		
1	Soldiers During Offense	12	22
2	Soldiers During Defense	8	11
	Total	20	33
	Second Phase		
	All Soldiers		
3	Squads During Offense	6	6
4	Squads During Defense	6	6
	Total	12	12
	Grand Total	32	45

First Phase

Subjects 1 and 2. Same as Lessons 1, 2, 4, 8, and 9 of Subject 1 of the tactical training of infantry KUBUNDAE as well as Lessons 1, 2 and 3 of Subject 2 of above.

Note: The security KUBUNDAE will make a complete study of Subjects 1 and 2.

Second Phase

Subject 3. Squads During Offense

Same as Lesson 1 in Subject 1 on tactical training of an infantry KUBUNDAE.

Subject 4. Squads During Defense

Same as Lessons 1 and 2 in Subject 12 on the tactical training of infantry element.

Chapter 3. Marksmanship Training

A. Purpose of Study

1. To make a study of the structure of weapons and of their combat capabilities, and to give instruction on how to protect weapons and how to maintain them in a combat-ready state.

2. To train soldiers to fire their weapons correctly and use it skillfully in combat.

3. To train the self-propelled gun crew members on proper use of their weapon.

B. Training Methods

1. Composite subjects are included in the lesson plan, and each subject is divided into sections containing many lessons. For example, sections under the subject of marksmanship training include the following lessons: structural study of weapons, outline of marksmanship principles, firing methods, hand grenade, observation of the battlefield, estimation of distance, etc.

2. Time allotted for lectures on marksmanship training is two to three hours, and that for firing practice may be more than that. Time is also allotted for each part; for example, two hours for the part titled "Firing Methods and Regulations," and one hour for the part titled "Structural Study of Weapons." Mutually related lessons in the various sections must be selected and coordinated when training is organized. For example, if the lesson on the structure of the rear sight is taken from the section on structural study, the lesson on loading and rear sight must be selected from the section on firing methods and regulations, and so must the lesson on the function of the rear sight from "outlines of marksmanship principles." In this way a most thorough and successful study can be made of the subject.

3. Marksmanship training lessons are organized by the platoon leader. He must carefully study each lesson and prepare for it. He must secure training aids such as weapons, firing aids, sketches, and placards; and he must instruct the squad leaders on training procedure.

The training must be concluded with firing practice. The time for firing practice is determined while the section on firing methods and firing regulations is being studied.

A platoon leader personally inspects each soldier's preparation for firing practice and makes a report to the company commander on the degree of the platoon's preparedness. After inspecting the platoon, the company commander carries out firing practice under the battalion commander's authorization.

4. For one-year soldier's marksmanship training is conducted in the manner prescribed in the lesson plan.

For seasoned soldiers in the first phase of winter training, the order of study may be changed depending upon type of weapons available in the KUBUNDAE. At any rate, these subjects must be studied in the first phase of winter training.

The subject "Squad Fire Control" is also studied by seasoned soldiers to expand their knowledge about and in preparation for squad leader's duty.

5. Riflemen and submachine gunners study collectively (without dividing into specialized teams) when studying all subjects (except Subjects 15 and 16) and sections (except Section 1).

Subject 15 is taught only to the riflemen, and Subject 16 is taught only to the submachine gunners. Studies on the first section of all subjects will be conducted separately. Riflemen study the structure of a carbine, and submachine gunners study the structure of a submachine gun.

6. During the study of the structure of weapons, special care must be taken to teach at the outset the regulations on the care and maintenance of weapons. Regulations on the care and maintenance of weapon under various combat and march conditions must be studied in all lessons pertaining to weapons, and not only during marksmanship training.

The function and structure of all parts and mechanisms of a weapon are studied by utilizing the weapon to be used as a training aid. In case no disassembled weapon is available special aids, slides, diagrams, sketches, placards, etc, are widely utilized.

Lessons relating to weapons are given personally by squad leaders. He must organize each lesson in such a way that each trainee will be able to disassemble and assemble the weapons, study the structure and inter-related functions of all parts, and check any part for malfunctions.

7. Lessons on marksmanship principles relating to infantry weapons are given by platoon leaders and if necessary, by company commanders. The solving of theoretical problems must be closely tied in with actual firing practice. For example, the meaning of direct fire and shot pattern must be shown to soldiers when they study trajectory. To ensure a good grasp of the lessons by the soldiers, various mock-ups, sketches, placards, charts, and films must be widely utilized.

8. Lessons on firing methods and firing regulations are given by squad leaders. Skills necessary for launching prompt and accurate fire must be attained during the process of training. Later, such skills will become automatic.

During firing practice, firing aids such as sighting bars, mirrors, front sights, diaphragm, reflecting mirrors, pantograph, disappearing targets, moving targets, will be widely utilized.

Training on how to load, unload, and fire, will always be conducted with practice ammunition.

I. Riflemen and Submachine Gunners

Subjects and Allocation of Time

Subject Number	Title	Hours for KUBUNDAE	
		Infantry	Reconnaissance
	First Phase		
	One-Year Soldiers		
1	Firing of Submachine Gun at Stationary Targets; the Structure of the Carbine	60	60
	Total	60	60

Subject Number	Title	Hours of KUBUNDAE	
		Infantry	Reconnaissance
	Seasoned Soldiers		
2	Heavy Machine Gun	12	10
3	Company Heavy Machine Gun	12	10
4	Checking the Fire Power of Various Weapons and How to Adjust Weapons to Fire Normally	6	6
5	Marksmanship Principles: Infantry Weapons	14	10
6	Squad Fire Control During Combat	10	7
	Total	54	43
	Second Phase		
	All Soldiers		
7	Firing of Carbine at Stationary Targets	35	35
8	Firing of Carbine (Submachine Gun) at Disappearing Targets	57	57
9	Firing of Light Grenade-Launcher at Stationary Targets	10	--
10	Firing the Carbine (Submachine Gun) From an Armored Carrier	--	10
	Total	102	102

First Phase

Subject 1. Firing of Submachine Gun at Stationary Targets, the Structure of the Carbine -- 60 hours

Section 1. Structure of Weapons -- 20 hours

Submachine Gun --- 12 hours

Lesson 1. Mission of submachine gun and bullets, combat capabilities, and general structure (demonstration fire on the target range).

Lesson 2. Regulations on the cleaning, lubrication, care (safekeeping), and use of submachine gun.

Lesson 3. Partial disassembly, complete disassembly, and assembly of submachine gun; accessories, inspection of accessories; and order of detailed inspection of submachine gun.

Lesson 4. Structure and function of barrel, receiver group, bolt chamber, and bolt.

Lesson 5. Structure and function of trigger housing, trigger group, and stock.

Lesson 6. Structure and function of drum magazine and box magazine; disassembly and assembly of magazine; structure of standard and special (tracer) bullets; inspection of ammunition; and how to place cartridges in the magazine.

Carbine -- 8 hours

Lesson 7. Function, combat capabilities, and general structure of the carbine; and structure of live ammunition with regular and special bullets (demonstration fire on the firing ground).

Lesson 8. Cleaning, lubrication, care, and handling rules; and cleaning accessories.

Lesson 9. Disassembly and assembly of carbine; order by which detailed inspection of soldiers' carbines are conducted.

Section 2. Outlines of Marksmanship Principles for Infantry Weapons -- 6 hours

Lesson 1. Fire phenomena; combustion of powder and its characteristics; formation of gas; pressure against the bullet; movement of bullet in the rifle bore; recoil; initial velocity; and killing power of the bullet.

Lesson 2. Flight of the bullet; force acting on the bullet during flight; trajectory; ascending and descending arcs and peak of trajectory; spin of bullet; and drift.

Lesson 3. Sighting and its elements; purpose of the sighting mechanism and outline of its structure; how to sight; various elements of sighting; aiming point; line of sight; angle of elevation; range; significance of the accurate rear sight mechanism; height of trajectory over line of sight; and direct fire and its significance.

Section 3. Firing Methods and Firing Regulations of Submachine Gun -- 28 hours

Lesson 1. Loading, unloading, and reloading of submachine gun.

Lesson 2. Preparing to fire from the standing position; loading of submachine gun; and rear sight mechanism.

Lesson 3. Training in sighting with front sight, diaphragm, and sight base.

Lesson 4. Preparing to fire, sighting, and pulling the trigger.

Lesson 5. How to place cartridges in a drum magazine and box magazine.

Lesson 6. Aiming at individual and group targets at effective range.

Lesson 7. Selection of firing position and firing from the prone position.

Lesson 8. Single-shot firing, continuous firing and suspension of fire.

Lesson 9. Preparing to fire with support from the prone position, and preparing to fire with support from prone position from a shelter.

Lesson 10. Utilization of support when firing from the prone, kneeling, and standing positions; and preparing to fire, aiming, and pulling the trigger in such instances.

Lesson 11. Ways of firing from skis.

Lesson 12. Aiming at a single stationary target at effective range.

Lesson 13. Firing practice.

Section 4. Hand-Grenade Throwing -- 6 hours

Lesson 1. Combat capabilities, function, and structure of the hand grenade; structure of fuse; and regulations governing handling and storing of hand grenades.

Lesson 2. Examination and inspection of hand grenade for malfunctions; condition of all parts of a hand grenade before arming; and what occurs when it is armed and thrown.

Lesson 3. Arming and disarming of hand grenade; preparation for throwing hand grenades from the standing position; and how to hit the target by throwing hand grenades from a fixed position.

Subject 2. Heavy Machine Gun -- 12/10 hours

Note: The numerator indicates time for infantry elements and the denominator for reconnaissance elements.

Lesson 1. Mission, combat capabilities, general structure, care, cleaning, and lubrication of the machine gun; and handling rules.

Lesson 2. Structure of the basic parts of the machine gun.

Lesson 3. Disassembly and assembly of the machine gun.

Lesson 4. Emplacement of machine gun, preparing to fire, and loading and unloading a machine gun.

Lesson 5. Rear sight; how to aim, how to launch point fire and distributed fire; and suspension of fire.

Subject 3. Company Machine Gun -- 12/10 hours

Lesson 1. Mission, combat capabilities, general structure, care, cleaning, lubrication, and storing of the machine gun.

Lesson 2. Structure of the basic parts of the machine gun.

Lesson 3. Disassembly and assembly of the machine gun.

Lesson 4. Unusual breakdowns that cause stoppage in fire and prevention and elimination of such breakdowns.

Lesson 5. Emplacing the machine gun, preparing to fire, and loading and unloading.

Lesson 6. Rear sight; how to aim at a target; firing; suspension of fire.

Subject 4. Checking the Fire Power of Various Weapons and How to Adjust Weapons to Fire Normally -- 6 hours

General regulations governing inspection of fire power of weapons; adjustments for normalizing fire power; preparing to inspect fire power; actual operation of the weapon to determine points to be inspected; the center of the shot pattern and fire concentration; determining the center of the pattern in connection with the points to be inspected; how to replace and adjust the front sight.

Subject 5. Marksmanship Principles: Infantry Weapons -- 14/10 hours

Lesson 1. Changeability of trajectory depending on elevation; flat trajectory; high-angle trajectory; trajectories for same ranges.

Lesson 2. Visible shot pattern and topographic shot pattern; and defiladed area and dead space.

Lesson 3. Determination of the type of dispersion, and deviation from center (probability of deviation).

Lesson 4. Outlines of fire effects; size and nature of target; distance to target; technical characteristics of weapon; characteristics of trajectory; changeability of fire effect depending on the effect of bullets (shells) on a given target and knowledge of the firing table.

Lesson 5. Effect of fire and computation of the quantity of ammunition required for destroying various targets.

Subject 6. Squad Fire Control During Combat -- 10/7 hours

The squad leader's duty on fire control is to assign missions to light machine gunners, riflemen, and submachine gunners; to issue commands for commencing fire, shifting fire from one target to another, and suspending fire; to concentrate fire on the most important target; to see to the ammunition supply; and to draw up the fire plan during defense.

Second Phase

Subject 7. Firing of Carbine at Stationary Targets -- 35 hours

Section 1. Structure of the Carbine -- 8 hours

Lesson 1. Structure and function of barrel, receiver group, trigger group, and sight system.

Lesson 2. Structure and function of bolt and its disassembly and assembly.

Lesson 3. Structure and function of magazine, butt, stock, and bayonet.

Lesson 4. Disassembly and assembly of the carbine.

Section 2. Outline of Marksmanship Principles for Infantry Weapon

Lesson 1. Outlines of dispersion and natural dispersion; and center of impact, "core area" and "core."

Lesson 2. Factors affecting accuracy, such as degree of preparedness and condition of riflemen and weapon.

Lesson 3. Determination of the center of impact, regulations governing adjustment of weapons to fire normally and the size of the "core area" for ranges up to 400 meters.

Lesson 4. Rules for firing at stationary targets in wind.

Section 3. Methods and Regulations on Firing the Carbine

Lesson 1. Loading, unloading, reloading, and complete loading of a carbine either in the standing or sitting positions by utilizing a support.

Lesson 2. Preparing to fire from the standing position and loading the carbine.

Lesson 3. Practice sighting with the front sight, diaphragm, and sight base.

Lesson 4. Preparing to fire, sighting, and pulling the trigger.

Lesson 5. Preparing to fire, loading, setting the sights, and unloading in the prone position.

Lesson 6. Aiming at a lone stationary target at effective range.

Lesson 7. Preparing to fire from the kneeling position, sighting, and pulling the trigger.

Lesson 8. Using supports in the prone, kneeling, and standing positions.

Lesson 9. Firing practice.

Subject 8. Firing of Carbine (Submachine Gun) at Disappearing Targets — 57 hours

Section 1. Structure of the Carbine (Submachine Gun) -- 10 hours

Lesson 1. Inspection of assembled and disassembled carbine (submachine gun).

Lesson 2. Condition of various parts and equipment of the carbine (submachine gun) prior to loading, and their function during loading, firing, and unloading.

Lesson 3. Function of the various parts and equipment of a submachine gun during continuous fire (only for submachine gunners).

Lesson 4. Preventive measures for stoppages during fire and how to get rid of the stoppages.

Section 3. How to Fire the Carbine (Submachine Gun) and Firing Regulations — 32 hours

Lesson 1. Selecting and readying positions for firing from the prone, kneeling, and standing positions.

Lesson 2. Preparing to fire, aiming, and pulling the trigger (bolt) in the prone position after advancing at the usual pace and at double time march.

Lesson 3. Preparing to fire, aiming, and pulling the trigger in the kneeling position.

Lesson 4. Preparing to fire from the prone, kneeling, and standing positions from a covered or ordinary trench.

Lesson 5. How to fire from the prone position at a target appearing for a short period, and rules governing such fire.

Lesson 6. How to fire from the kneeling and standing positions at a target appearing for a short period and, rules governing such fire.

Lesson 7. How to fire a carbine (submachine gun) without aiming.

Lesson 8. Selecting targets, and determining sight settings, aiming point, and the time to commence fire.

Lesson 9. Firing practice.

Section 4. Hand Grenade Throwing -- 6 hours

Lesson 1. Preparing to throw hand grenades, how to throw hand grenades at a trench from the standing or kneeling position.

Lesson 2. How to throw hand grenades from a trench or communication trench when advancing along through the trench.

Lesson 3. How to throw hand grenades at a trench while on the run.

Lesson 4. How to throw hand grenades far and accurately.

Section 5. Observation of the Battle Field and Determination of Distance -- 9 hours

Lesson 1. How to study the terrain; how to search and indicate targets; and signs by which targets are easily exposed.

Lesson 2. Selection of sites for observation posts; observation; disposition at observation posts.

Lesson 3. Search for targets based on the commander's instruction and reports on targets disclosed.

Lesson 4. Significance of correct estimates of distances in ensuring effectiveness of fire; how to estimate distances; how to estimate distances by pacing; and estimating the distance between two points.

Lesson 5. How to estimate distances by eye by dividing the area within a radius of 400 meters.

Lesson 6. How to estimate distances by eye on the basis of size and details of targets within a 400-meter radius.

Subject 9. Firing of Light Grenade Launcher at Stationary Targets -- 10 hours

This subject is described in the first part of the lesson plan.

Subject 10. Firing the Carbine (Submachine Gun) From an Armored Carrier -- 10 hours

Section 3. How to Fire the Carbine (submachine gun) and firing regulations -- 10 hours

Lesson 1. How to fire during a momentary pause or without stopping at disappearing targets; rules governing such fire; and safety measures.

Lesson 2. Preparing to fire by commander's order; loading, setting the sights, and preparing to fire during marches and during momentary halts; and aiming and firing at various targets.

II. Light Machine Gunners

Subjects and Allocation of Time

Subject Number	Title	Hours for KUBUNDAE	
		Infantry	Reconnaissance
	First Phase		
	One-Year Soldiers		
1	Firing the Submachine Gun at Stationary Targets, and the Structure of the Carbine	60	60
	Total	60	60
	Seasoned Soldiers		
2	Heavy Machine Gun	12	10
3	Light Machine Gun	12	10
4	Inspection of the Fire Power of Specialized Weapons and How to Adjust Them to Fire Normally	6	6
5	Marksmanship Principles: Infantry Weapon	14	10
6	Squad Fire Control During Combat	10	7
	Total	54	43
	Second Phase		
	All Soldiers		
7	Firing the Carbine at Stationary Targets	16	16
8	Firing the Light Machine Gun at Stationary Targets	51	51
9	Firing the Light Machine Gun at Disappearing Targets	15	15

Subject Number	Title	Hours for KUBUNDAE	
		Infantry	Reconnaissance
10	Firing the Light Machine Gun at a Group of Targets	10	10
11	Firing the Light Grenade Launcher at Stationary Targets	10	--
12	Firing the Light Machine Gun From an Armored Carrier	--	10
	Total	102	102

First Phase

Subject 1. Firing the Submachine Gun at Stationary Targets, and the Structure of the Carbine -- 60 hours

Same as Subject 1 for riflemen and submachine gunners.

Subject 2. Heavy Machine Gun -- 12/10 hours

Same as Subject 2 for riflemen and submachine gunners.

Subject 3. Company (TN Sic.) Machine Gun -- 12/10 hours

Same as Subject 3 for riflemen and submachine gunners.

Subject 4. Inspection of the Specialized Fire Power of Weapons and How To Adjust Them to Fire Normally -- 6 hours

Same as Subject 4 for riflemen and submachine gunners.

Subject 5. Marksmanship Principles: Infantry Weapons -- 14/10 hours

Same as Subject 5 for riflemen and submachine gunners.

Subject 6. Squad Fire Control During Combat -- 10/7 hours

Same as Subject 6 for riflemen and submachine gunners.

Second Phase

Subject 7. Firing the Carbine at Stationary Targets -- 16 hours

Section 1. Structure of the Carbine -- 6 hours

Lesson 1. Rules on the cleaning, lubrication, protection and use of the carbine.

Lesson 2. Structure and function of the barrel, receiver group, hammer, and sighting system.

Lesson 3. Structure and function of the bolt and its disassembly and assembly.

Lesson 4. Disassembly and assembly of the carbine.

Section 3. How to Fire the Carbine and Firing Regulations -- 10 hours

Lesson 1. How to load and unload the carbine in the standing and sitting positions by utilizing a support.

Lesson 2. Preparing to fire from the standing position and loading the carbine.

Lesson 3. Preparing to fire, sighting, and pulling the trigger.

Lesson 4. Preparing to fire from the prone position, firing, loading, rear sight system, and unloading.

Lesson 5. Sighting at a lone stationary target at effective range.

Lesson 6. Firing, and firing from the prone position with support.

Lesson 7. Firing practice.

Subject 8. Firing the Light Machine Gun at Stationary Targets -- 51 hours

Section 1. Structure of the Light Machine Gun -- 10 hours

Lesson 1. Purpose of the light machine gun, combat capabilities, and general structure (demonstration fire).

Lesson 2. Procedure for cleaning, lubricating, protecting, and using machine guns; and machine gun accessories.

Lesson 3. Structure and purpose of the gas cylinder, regulator, barrel jacket, front sight, receiver group, rear sight, and magazine latch.

Lesson 4. Structure and function of the bolt, slide, and gas block.

Lesson 5. Structure of the receiver, trigger group, butt, locking lug, and main spring.

Lesson 6. Structure and function of the magazine; its disassembly and assembly; inspection of ammunition; and how to load the magazine.

Lesson 7. Disassembly and assembly of the light machine gun.

Lesson 8. Inspection of assembled and disassembled machine gun.

Lesson 9. Preparing to fire the machine gun.

Section 2. General Remarks on Marksmanship Principles of Infantry Weapons -- 8 hours

Same as Section 2 of Subject 7 for riflemen and submachine gunners.

Section 3. How to Fire the Light Machine Gun and Firing Regulations -- 18 hours

Lesson 1. Selection of the emplacement of the machine gun; and disposition of the gunner and assistant gunner behind the machine gun.

Lesson 2. Loading and unloading the machine guns and rear sight.

Lesson 3. Preparing to fire from the prone position and sighting.

Lesson 4. How to fire single-shots and regulation governing such fire.

Lesson 5. How to fire from the standing and kneeling positions from a trench.

Lesson 6. How to fire from skis.

Lesson 7. Emplacing the machine gun after an ordinary march or double-time march.

Lesson 8. How to utilize supports and a covered trench in firing from various positions, such as prone, kneeling, and standing positions.

Lesson 9. Aiming at targets within effective ranges.

Lesson 10. How to fire in wind.

Lesson 11. Ball-ammunition firing.

Section 4. Hand Grenade Throwing -- 6 hours

Same as Section 4 of Subject 8 for riflemen and submachine gunners.

Section 5. Observation of the Battle Field and Estimation of Distances -- 9 hours

Same as Section 5 of Subject 8 for riflemen and submachine gunners.

Subject 9. Firing the Light Machine Gun at Disappearing Targets -- 35 hours

Section 1. Structure of the Light Machine Gun -- 4 hours

Lesson 1. General Measures for preventing and eliminating stoppages during fire, and common breakdowns which cause stoppages.

Lesson 2. How to eliminate stoppages.

Section 3. How to Fire the Light Machine Gun and Firing Regulations -- 11 hours

Lesson 1. How to fire from the standing position at a single disappearing target bobbing up and down in a trench, and firing regulations.

Lesson 2. How to fire from the prone position at disappearing targets and firing regulations.

Lesson 3. How to fire at disappearing targets by shifting fire in depth or along the width; and firing regulations.

Lesson 4. How to fire at disappearing targets that appear from covered trenches.

Lesson 5. Directing sustained fire at disappearing targets with consideration for wind correction.

Lesson 6. Executing firing duties; selection of targets, rear sight, and aiming point; designation of the time for commencing fire.

Lesson 7. Firing practice.

Subject 10. Firing the Light Machine Gun at a Group of Targets -- 10 hours

Section 1. Structure of the Light Machine Gun -- 2 hours

Lesson 1. Various parts and systems of a machine gun prior to loading, and their functions during loading.

Lesson 2. The function of the various parts and systems of a machine gun in operation.

Section 3. How to Fire the Light Machine Gun and Firing Regulations -- 8 hours

Lesson 1. How to fire at a group of silhouette targets which are clearly visible, and firing regulations.

Lesson 2. How to fire at a group of target presenting a narrow front, and firing regulations.

Lesson 3. Rules on firing at a wide camouflaged target.

Lesson 4. Firing practice.

Subject 11. Firing the Light Grenade Launcher at Stationary Targets -- 10 hours

This subject was described in the first section of this book.

Subject 12. Firing the Light Machine Gun From an Armored Carrier -- 10 hours

Lesson 1. How to fire during momentary pauses at disappearing targets, and firing regulations; how to fire without pause, and firing regulations; and safety measures.

Lesson 2. Preparing to fire according to the commander's order; loading the machine gun during marches and temporary halts; rear sight; firing preparations; sighting; and firing at various targets.

III. Company Machine Gun KUBUNDAE and Heavy Machine Gun KUBUNDAE

Subjects and Allocation of Time

Subject Number	Title	Hours for KUBUNDAE	
		HMG	Co M G
	First Phase		
	One-Year Soldiers		
1	Firing the Submachine Gun at Stationary Targets, and the Structure of the Carbine	60	60
	Total	60	60
	Seasoned Soldiers		
2	Heavy Machine Gun	--	12
3	Company Machine Gun	12	--
4	Light Machine Gun	10	10
5	Antiaircraft Machine Gun	12	12
6	Checking the Fire Power of the Weapons and How to Adjust Them to Fire Normally	10	10
7	Marksmanship Principles; Infantry Weapon	14	14
8	Machine Gun Squad Fire Control	14	14
	Total	72	72
	Second Phase		
	All Soldiers		
9	Firing the Machine Gun at Stationary Targets	76	76
10	Firing the Machine Gun at Wide Targets and Targets Lying in Depth	48	48
11	Firing the Carbine at Stationary Targets	20	20
	Total	144	144

First Phase

Subject 1. Firing the Submachine Gun at Stationary Targets, and the Structure of the Carbine -- 60 hours

Same as Subject 1 for riflemen and submachine gunners.

Subject 2. Heavy Machine Gun — 12 hours

Same as Subject 2 for riflemen and submachine gunners.

Subject 3. Company Machine Gun — 12 hours

Same as Subject 3 for riflemen and submachine gunners.

Subject 4. Light Machine Gun — 10 hours

Lesson 1. Mission of the light machine gun, combat capabilities, and general structure.

Lesson 2. Disassembly and assembly of the machine gun, and nomenclature and function of various parts.

Lesson 3. Loading, unloading, and firing the machine gun.

Subject 5. Antiaircraft Machine Gun — 12 hours

Lesson 1. Purpose, combat capabilities, general structure, handling, and protection of the antiaircraft machine gun.

Lesson 2. General description of the structure and function of the antiaircraft machine gun.

Lesson 3. Rules and order of disassembly and assembly of the various parts of the antiaircraft machine gun.

Lesson 4. Preparing to fire and firing at ground and aerial targets.

Subject 6. Checking the Fire Power of the Weapons and How to Adjust Them Normally — 10 hours

Same as Subject 4 for riflemen and submachine gunners.

Subject 7. Marksmanship Principles: Infantry Weapons — 14 hours

Same as Subject 5 for riflemen and submachine gunners.

Subject 8. Machine Gun Squad Fire Control — 14 hours

Lesson 1. The squad leader's responsibility concerning fire control during the offensive, reconnaissance, establishment of the mission of the squad, orders on firing and shifting fire from one target to another, suspension of fire, firing at various targets and adjustment of fire, emplacement, and ammunition supply.

Lesson 2. The squad leader's responsibility concerning fire control during defense, selection of reference points, preparation of firing data, drawing up of the fire plan, establishment of the mission of the squads, arranging for observation, selection and evaluation of targets, delivering the order to fire, to shift fire, and suspend fire, and ammunition supply.

Second Phase

Subject 9. Firing the Machine Gun at Stationary Targets — 76 hours

Section 1. Structure of the Machine Gun — 26 hours

Lesson 1. Mission of the machine gun, combat capabilities, and general structure (demonstration fire in the range).

Lesson 2. Regulations on the cleaning, lubrication, protection (safekeeping) and use of the machine gun; and machine gun accessories.

Lesson 3. For machine gunners: structure and function of the barrel, receiver group, sliding plate, slide bolt and barrel catch.

For company machine gunners: structure and function of the barrel, gas cylinder, gas adjuster, cooling jacket, sight, receiver group, and feeding mechanism.

Lesson 4. For heavy machine gunners: structure and function of the crank feeder, recoil spring, reloading, cocking knob, and sighting system.

For company machine gunners: structure and function of bolt and bolt body.

Lesson 5. For heavy machine gunners: purpose and structure of the machine gun stock; structure of ammunition belt and how to load the ammunition belt; and spare parts for the machine gun.

For company machine gunners: structure and function of the bolt stud, trigger group, sight guard, butt, and locking lug; and structure and function of the feeder and ammunition belt.

Lesson 6. Disassembly and assembly of the machine gun, and detailed inspection procedure for gunners.

Lesson 7. Inspection of an assembled and disassembled machine gun.

Section 2. Outline of Marksmanship Principles: Infantry Weapons — 8 hours

Same as Section 2 of Subject 7 for riflemen and submachine gunners.

Section 3. How to Fire the Machine Gun, and Firing Regulations — 33 hours

Lesson 1. Selection of the emplacement and emplacing the machine gun; position of the machine gun crew.

Lesson 2. Loading and unloading the machine gun.

Lesson 3. Rear sight.

Lesson 4. Aiming the machine gun at the target, firing, and suspending fire.

Lesson 5. Actions of the machine gun crew, and executing the command, "Machine gun prepare for combat."

Lesson 6. How to direct single shots and bursts at single stationary targets.

Lesson 7. Firing practice.

Section 5. Observation of the Battle Field and Estimation of Distances — 9 hours

Same as Section 5, in Subject 8, for riflemen and submachine gunners.

Subject 10. Firing the Machine Gun at Wide Targets and Targets Lying in Depth -- 48 hours

Section 1. Structure of the Machine Gun -- 16 hours

Lesson 1. Various parts and equipment of the machine gun prior to loading.

Lesson 2. Function of the various parts and equipment of the machine gun during loading.

Lesson 3. Function of the various parts and equipment of the machine gun during firing.

Lesson 4. Condition of the various parts and equipment of the machine gun after the firing.

Section 3. Firing the Machine Gun and Firing Regulations -- 32 hours

Lesson 1. Preparing to fire from the standing position from a trench.

Lesson 2. Preparing to fire from the kneeling position from a trench.

Lesson 3. How to utilize various surface objects, communication trenches, shell craters, etc in conducting fire.

Lesson 4. How to fire the machine gun at wide targets, and firing regulations.

Lesson 5. How to fire at wide masked targets, trenches, and boundary lines, and firing regulations.

Lesson 6. How to fire at narrow targets lying in depth, and firing regulations.

Lesson 7. How to fire at wide targets situated in depth, and firing regulations.

Lesson 8. Firing practice.

Subject 11. Firing the Carbine at Stationary Targets -- 20 hours

Same as Subject 7 for light machine gunners.

IV. Antiaircraft Machine Gun KUBUNDAE

Subjects and Allocation of Time

Subject Number	Title	Hours
	First Phase	
	One-Year Soldiers	
1	Firing the Submachine Gun at Stationary Targets, and the Structure of the Carbine	60
	Total	60
	Seasoned Soldiers	
2	Antiaircraft Machine Gun	14
3	Heavy Machine Gun	12
4	Company Machine Gun	8
5	Checking the Fire Power of the Various Weapons and How to Adjust Them to Fire Normally	10
6	Marksmanship Principles: Infantry Weapons	14
7	Squad Fire Control	14
	Total	72
	All Soldiers	
8	Firing the Antiaircraft Machine Gun at Fixed Ground Targets	68
9	Firing the Antiaircraft Machine Gun at Aircraft in Level Flight	48
10	Firing the Carbine at Stationary Targets	20
	Total	136

Note: Regimental antiaircraft machine gunners will study the equipment of the battalions and antiaircraft machine gunners of the battalions, the equipment of the regiment.

First Phase

Subject 1. Firing the Submachine Gun at Stationary Targets, and the Structure of the Carbine — 60 hours

Same as Subject 1 for riflemen and submachine gunners.

Subject 2. Antiaircraft Machine Gun -- 14 hours

Lesson 1. Purpose of the antiaircraft machine gun, and its combat characteristics, general structure, care, and maintenance.

Lesson 2. Structure and function of the antiaircraft machine gun.

Lesson 3. How to assemble and disassemble the antiaircraft machine gun.

Lesson 4. Preparing to fire at aerial and ground targets.

Subject 3. Heavy Machine Gun -- 12 hours

Same as Subject 2 for riflemen and submachine gunners.

Subject 4. Company Machine Gun -- 8 hours

Same as Subject 3 for riflemen and submachine gunners.

Subject 5. Checking the Fire Power of the Various Weapons and How to Adjust Them to Fire Normally -- 10 hours

Same as Subject 4 for riflemen and submachine gunners.

Subject 6. Marksmanship Principles: Infantry Weapons -- 14 hours

Same as Subject 5 for riflemen and submachine gunners.

Subject 7. Squad Fire Control -- 14 hours

Lesson 1. Squad leader's responsibility concerning fire control during the offensive; selection and preparation of fire positions from which to direct fire at aerial and ground targets; preparing to fire the antiaircraft machine gun; observation of enemy planes and the battle field; using surface objects as guide to targets; preparing to fire the machine guns at aerial targets; shifting from aerial to ground targets, and from ground to aerial targets; delivery of verbal orders and orders by flag signals and flares; receiving signals from aerial observation post; search for targets; accompanying fire; barrage; laying smoke screens; and ammunition supply.

Lesson 2. Squad leaders' responsibilities concerning fire control during defense; selection and preparation of positions; emplacement of machine guns; arrangement for observation of the battle field and for air defense watches; formulation of squad duties; drawing up of fire plans; search for and designation of targets; squad fire control during the repulsion of enemy planes; shifting from aerial to ground targets; and vice versa; firing at disappearing targets and moving armored targets; shifting of fire along the front or in depth; receiving signals from the aerial observation post; and ammunition supply.

Second Phase

Subject 8. Firing the Antiaircraft Machine Gun at Fixed Ground Targets — 68 hours

Section 1. Structure of the Antiaircraft Machine Gun — 22 hours

Lesson 1. Purpose of the antiaircraft machine gun; combat capabilities; general structure; and ammunition (to be used for demonstration fire at the range).

Lesson 2. Regulations on cleaning, lubrication, care (safekeeping) and use of the antiaircraft machine gun and its accessories.

Lesson 3. Purpose and structure of the barrel, receiver group, toggle joint, and sliding plate.

Lesson 4. Function and structure of the bolt, main spring, and receiver group cover.

Lesson 5. Structure and function of the feeder, cocking knob, sighting system (open), trigger group, and reloading handle.

Lesson 6. Function and general structure of the antiaircraft machine gun; and structure and function of the gun mount.

Lesson 7. Structure and function of the revolving mount, elevating mechanism, traversing gear, brake, seat, and the mount support.

Lesson 8. Structure and function of the trigger group, separator (TN Sic.) and balancing system.

Lesson 9. Structure and function of the cradle and reloading system.

Lesson 10, Function and structure of the optical sighting PU*.

Lesson 11. Function and structure of the regulator, ammunition belt, and ammunition box; structure of the cartridge; and regulations on care and handling of ammunition.

Lesson 12. Regulations to be observed during assembly and disassembly of the antiaircraft machine gun; and field stripping and complete assembly and disassembly of the machine gun.

Lesson 13. Regulations on and order of assembly and disassembly of various components of the antiaircraft machine gun.

Lesson 14. Regulations on and order of detailed inspection of the antiaircraft machine gun; inspection of the mechanism of the machine gun in the assembled state; and inspection of a machine gun in the disassembled state.

Section 2. General Remarks on Marksmanship Principles for Infantry Weapons — 8 hours

Same as Section 2 of Subject 7 for riflemen and submachine gunners.

Section 3. How to Fire the Antiaircraft Machine Gun and Firing Regulations -- 24 hours

Lesson 1. Emplacing and removing the machine gun; and the transition from march to combat and vice versa.

Lesson 2. Moving the antiaircraft machine gun and how to move it into firing position.

Lesson 3. Selecting the fire position, emplacing the antiaircraft machine gun, and position of the crew at the fire position when firing at ground targets.

Lesson 4. Loading and unloading of the antiaircraft machine gun and installing the sighting system.

Lesson 5. How to regulate the optical rear sight PU* in the antiaircraft machine gun; and how to load the ammunition belt and align the cartridges.

Lesson 6. Aiming the machine gun; sighting for direction and elevation; and how to make manual adjustments.

Lesson 7. Preparing firing data under conditions of limited visibility; plotting and adjustment of the sight based on the plotting data.

Lesson 8. Rules on how to fire at stationary targets; and how to aim the machine gun at targets within effective range.

Lesson 9. Changing sights during fire; observation on the result of fire; correction of fire; and suspension of fire.

Lesson 10. Firing practice.

Section 4. Hand Grenade Throwing -- 6 hours

Same as Section 4, Subject 8, for riflemen and submachine gunners.

Section 5. Observation of the Battle Field and Estimation of Distances -- 8 hours

Same as Section 5, Subject 8, for riflemen and submachine gunners.

Subject 9. Firing the Antiaircraft Machine Gun at Aircraft in Level Flight -- 48 hours

Section 1. Structure of the Antiaircraft Machine Gun -- 5 hours

Lesson 1. Function and basic data on the rear sight, its basic parts, functions, and structure.

Lesson 2. Installation and removal of the antiaircraft rear sight, and accessories.

Lesson 3. Regulations on the use of the antiaircraft rear sight.

Lesson 4. Adjustment of the rear sight, adjustment of the parallelogrammic system; and handling and care of the rear sight.

Section 2. General Discussion of Marksmanship Principles for Infantry Weapons -- 4 hours

Lesson 1. Characteristics of the aircraft as a target; and the lead and corrections according to the speed of the target and slant range. For ranges of 500 meters, 1,000 meters, 1,500 meters, and 2,000 meters: flight time of bullet, lead angle, firing point, sighting point, course of target, barometric reading at the altitude, slant range, time lead, computation of necessary data, guntarget range, target, angle, and dive angle.

Lesson 2. Function of the antiaircraft rear sight, computation of lead by using the rear sight, corrections according to gun-target range and speed.

Section 3. How to Fire the Antiaircraft Machine Gun and Firing Regulations -- 30 hours

Lesson 1. Preparing for the fire position for firing at aerial targets, and duties and position of the machine gun crew.

Lesson 2. Installation of the antiaircraft rear sight, its removal, adjustment of the antiaircraft rear sight, and the actions of the crew in such cases.

Lesson 3. Rules on how to aim at aerial targets; selection of the aiming point, sighting, and aiming the machine gun at aerial targets by utilizing the antiaircraft rear sight.

Lesson 4. How to fire at aerial target by means and of a curtain of fire and barrage fire.

Lesson 5. Rules on aiming at crossing ("route barometer") targets flying or around 0° and 180° target angles.

Lesson 6. Rules on aiming at aircraft flying at various target angles.

Lesson 7. Firing at aircraft in level flight, how (tracking fire or barrage fire) and when to fire, and correction of fire.

Lesson 8. General discussion on target size; size of crossing and incoming aircraft; and estimation of the target size.

Lesson 9. How to select collimator by estimating the target size.

Lesson 10. Regulations on conducting tracking fire, and carrying out the fire order.

Lesson 11. Firing practice.

Section 5. Observation of the Battlefield and Estimation of Distances -- 9 hours

Lesson 1. Duties of the observers during aerial observation, field glasses and their utilization, estimation of distances by field glasses.

Lesson 2. Identification of aircraft; determination of their types; how to search and indicate aerial targets; report by observers on the detection of aircraft; determination of the flight course of an aircraft by its silhouette.

Lesson 3. How to estimate distances to and speeds of aircraft.

Lesson 4. Structure and function of RIRA* (TN Presumbaly a range finder.); how to utilize RIRA* when estimating range targets.

Lesson 5. How to estimate range by eye, RIRA*, field glasses, and reference points.

Lesson 6. Estimation of the size of an airplane passing along the front and through a route of 0 degree or 180 degrees, and estimation of the speed of an airplane by its model.

Lesson 7. How to estimate distances to surface objects and targets by sound and gun flashes at night, and how to estimate distances to surface objects and targets when the fields are illuminated by flares.

Subject 10. Firing the Carbine at Stationary Targets — 20 hours

Same as Subject 7 for submachine gunners.

V. Self-Propelled Gun KUBUNDAE

Subjects and Allocation of Time

Subject Number	Title	Hours			
		Gun Crew	Commanding Officers	Artillery Commanders and Loaders	Drivers
	First Phase				
1	Intermittent Fire at Stationary Targets and Firing From Stationary Positions	10	40	48	12
2	Firing From the Same Position at Moving Targets	14	4	4	-
	Total	24	44	52	12
	Second Phase				
3	Firing From the Same Position at Moving Targets	10	54	68	-
4	Firing During Temporary Halts at Stationary Targets	10	14	20	-
5	Firing From Defiladed Position	12	10	10	-
6	Sniping	-	10	10	10
	Total	32	88	108	10
	Grand total	56	132	160	22

First Phase

Subject 1. Intermittent Fire at Stationary Targets and Firing From Fixed Positions

Section 1. Armament, Components of the Weapon and Observation Instrument, and Ammunition (Self-Propelled Gun Unit Commanders, Section Commanders, and Loaders — 6 hours; drivers - 2 hours)

Note: Drivers will study only Lesson 1.

Lesson 1. Weapon and observation instruments; how to utilize rear sight and observation instrument during fire and observation; installation of rear sight and observation instrument, possible malfunctions of rear sight and preventive measures, and replacement of rear sight and light; inspection, protection, and care of rear sight under various conditions.

Lesson 2. Function of the various parts and equipment of the gun; i.e., function of bolt, elevating mechanism, traversing gear, and recoil mechanism.

Lesson 3. Possible troubles in bolt, elevating mechanism, traversing gear, trigger group, and recoil mechanism; detection of troubles and how to eliminate them; utilization of reserve ZIP# and replacement of parts.

Lesson 4. Locked state of recoil rod, counterrecoil rod, elevating mechanism, traversing gear and bolt; inspection and examination of the function of the bolt assembly and trigger group; quantity of liquid in the counterrecoil and recoil mechanism; determination of the pressure within the counterrecoil mechanism.

Section 2. Principles of Self-Propelled Gun Fire (Self-Propelled Gun Unit Commanders, Section Commanders, and Loaders — 6 hours)

Lesson 1. Measuring angles of elevation and traverse by utilizing the sight, field glasses, and other available equipment.

Lesson 2. Trajectory; height of trajectory over line of sight and its significance; and angles of sight, elevation, departure, fall, and of impact.

Lesson 3. Beaten zone; aimed beaten zone and its practical significance; size of aimed beaten zones during fire from various distances; direct fire; range of direct fire; and the relationship of the range of direct fire on the height of a target and the inclination of trajectory.

Lesson 4. Dispersion; the phenomena of dispersion and its cause; principles of dispersion; dispersion based on range, height, and deflection; determination of the center of the beaten zone, center of dispersion, and average deviation; and determining the center of the beaten zone when there are only few shell craters.

Section 3. Regulations on Self-Propelled Gun Fire (Self-Propelled Gun Unit Commanders, Section Commanders and Loaders — 6 hours; Drivers — 4 hours)

Lesson 1. How to fire the self-propelled gun; preparing to fire; designation of targets; fire from the same position and during temporary halts; selection of firing positions; determination of initial lay; adjustment fire and fire for effect; how to execute range adjustment fire; and evaluation of hits upon the target.

Lesson 2. Firing at night and under poor visibility conditions; preparing firing positions and readying the self-propelled gun for night firing; regulations on firing at illuminated and illuminating targets; preparing initial fire data; and drawing up the firing plans.

Section 4. Operating the Guns (Crew — 4 hours; Self-Propelled Gun Unit Commanders — 14 hours; Section Commanders and Loaders — 16 hours; Drivers — 3 hours)

Note: Drivers will study only Lessons 1, 3, and 7.

Lesson 1. Execution of the order "Prepare for combat"; occupying the firing position; adjustment of seat and forehead rest; operation of the sighting apparatus; and loading the gun.

Firing; actions to be taken when the shells do not fire and execution of the order "Cease fire."

Lesson 2. Lesson 1 will be repeated with gas masks on.

Lesson 3. Firing from a stationary position at fixed targets; selection of targets; selection of shells and fuse; determination of initial lay; orders to commence firing and its execution; sighting equipment; aiming at targets; and firing.

Lesson 4. How to adjust fire by bracketing; directing adjustment fire at high open targets and small targets; how to bracket targets; narrowing of bracket; directing adjustment fire by changing the "sight number"; and fire for effect.

Lesson 5. Range adjustment fire and deflection adjustment fire based on changes in the point of aim; adjustment fire at high, open targets; determination of initial lay; changing of aiming point based on the height and direction; and fire for effect.

Lesson 6. Range adjustment fire based on sensings; adjustment fire at targets on sloping surface; how to aim a gun at a target; how to aim a gun at a target; how to align the cross lines of panoramic sight with the burst; aiming and firing; and fire for effect.

Lesson 7. Simultaneous execution of fire and cease fire orders; search for targets; estimation of distances and designation of targets; determination of initial lay; rear sight equipment; deflection and range adjustment fires; loading, sighting, and firing.

Section 5. Observation, Estimation of Ranges, and Designation of Targets (Crew component -- 2 hours; Self-Propelled Gun Unit Commanders; Section Commanders, and Loaders -- 4 hours)

Lesson 1. Estimation of range through the visibility dial attached to the sighting apparatus; and estimation of range by maps.

Lesson 2. How to indicate targets; how to locate targets from a position outside the self-propelled mount with and without the aid of sighting equipment; and location of targets from the mount.

Section 6. Firing (Crew -- 4 hours, Gun Unit Commanders -- 4 hours; Section Commanders and Loaders -- 10 hours; and Drivers -- 3 hours)

Second Phase

Subject 2. Firing From the Same Position at Moving Targets

Section 1. Armament, Structure of Gun Components, Observation Instrument, and Ammunition (Self-Propelled Gun Commanders -- 4 hours; Section Commanders and Loaders -- 8 hours)

Note: The study of this subject begins with the first phase.

Lesson 1. Care and protection of the gun in winter; inspection of the moving parts of the gun prior to firing; and winter lubrication.

Lesson 2. Preparing to fire; possible malfunctions during fire; their prevention and elimination; observation of the function of the gun; and protection of the barrel when moving through obstacles and when firing from a shelter.

Lesson 3. Installation of sighting equipment; preparing the gun and rear sight; setting the collimator and rear sight by means of a distant point and by coordinates; setting the collimator and rear sight; preparing reports and inspection plan; and recording data.

Lesson 4. Types of shell, numerical designation, and packing; how to transport and pack; inspection of ammunition, preparing them for firing and loading onto the vehicle.

Section 2. Principles of Self-Propelled Gun Fire (Self-Propelled Gun Unit Commanders -- 4 hours; Section Commanders and Loaders -- 6 hours)

Lesson 1. Function of shell and projectile; shattering effect; fragmentation effect, and demolition effect; armor penetration ability of various shells; and size of the beaten zone and its destructive effect.

Lesson 2. Effectiveness of fire and its dependability; principal factors affecting the rate of fire for effect; determination of concentration and accuracy; and estimation of the anticipated rate of fire for effect based on the center and rate of dispersion.

Lesson 3. Utilization of the firing table.

Section 3. Rules on Self-Propelled Gun Fire (Self-Propelled Gun Unit Commanders -- 4 hours; Section Commanders and Loaders -- 6 hours)

Lesson 1. Characteristics of fire directed at moving targets; determination of direction and speed of targets; determination of initial lay; computation of lead based on speed of targets, direction of travel, and range; adjustment fire; and regulations on direct fire.

Lesson 2. How to apply firing regulations when firing the self-propelled gun located on sandy place, at a moving target.

Section 4. Gunnery Training (Crew -- 6 hours, Self-Propelled Gun Unit Commanders -- 32 hours; Section Commanders and Loaders -- 40 hours)

Lesson 1. Firing at crossing targets; estimating speed; initial lay when the target moves at various speeds and in various directions; point of aim; installing the sighting instrument; sighting and firing and deflection and range adjustment fires.

Lesson 2. Firing at targets moving to the flank; determining the speed of the target; initial lay; how much lead to use; and firing.

Lesson 3. Firing at targets moving over sloping terrain; all possible directions of movement of target and initial lay; how much lead to use; and firing.

Lesson 4. How to throw hand grenades from a halted self-propelled gun mount; how to detect a target in the vicinity of a self-propelled gun; preparation for throwing hand grenades; order to throw hand grenades; hand grenade throwing; and safety measures to be observed when throwing hand grenades from a self-propelled gun mount.

Section 5. Observation, Estimation of Distances, and Designation of Targets. (Crew -- 4 hours; Self-Propelled Gun Unit Commanders, Section Commanders and Loaders -- 4 hours)

Lesson 1. Study of terrain, selection of and estimation of distances to reference points; detection of target, determination of distance to the target and reporting it to the self-propelled gun unit commander.

Lesson 2. Determining the distance from a halted self-propelled gun; and direction and speed of target.

Section 6. Firing (Crew -- 6 hours; Self-Propelled Gun Unit Commanders -- 6 hours; Section Commanders and Loaders -- 8 hours)

Section 7. Fire Control (Crew -- 8 hours; Self-Propelled Gun Unit Commanders -- 4 hours)

Lesson 1. Fire control of the self-propelled gun platoon during an offense; reconnaissance and evaluation of a target; unified reference point and establishment of the procedure for indicating targets; organization of coordinated fire; preparation of initial firing data; establishment of fire control signals; observation of the battle field; report on disclosed target; commands for opening fire and conduct of fire; conduct of fire by crew members; execution of order calling for concentrated platoon fire; shifting of fire; division of fire; and shifting to independent fire.

Lesson 2. Fire control of self-propelled gun platoon during defense; study of terrain and determination of the direction of possible enemy attack; unified reference point and establishment of the procedure for indicating targets; allocation of firing duties; selection, establishment, and occupation of firing position; preparation of initial fire data; drawing up of firing plans; organization of observation; procedures for opening and conducting fire; and maneuvering of fire.

Lesson 3. Conducting fire as a platoon component.

Subject 3. Firing During Temporary Halts at Stationary Targets

Section 3. Self-Propelled Gun Firing Regulations (Self-Propelled Gun Unit Commanders -- 2 hours; Section Commanders and Loaders -- 8 hours)

Lesson 1. Firing during temporary halts; selection of sites for temporary halts and period of halt; temporary halts and distance between halts; and preparation for initial and later fires.

Lesson 2. Firing during temporary halts at stationary targets; initial adjustment of rear sight and determination of aiming point; and range adjustment fire.

Section 4. Gunnery Training (Crew -- 8 hours; to Self-Propelled Gun Unit Commanders, Section Commanders and Loaders -- 10 hours)

Lesson 1. Synchronization of sight when firing during temporary halts at stationary targets; rear sight adjustments; loading, sighting, and firing.

Lesson 2. Firing during temporary halts at stationary targets; determination of initial fire data; placing rear sight; loading; rear sight adjustment; and firing during temporary halts.

Lesson 3. Synchronized fire during temporary halts at stationary targets; execution of the order, "Prepare for combat"; observation of the battlefield and indication of targets; selection of target; selection of shells; determination of initial lay; placing rear sight and accomplishing approximate lay of a gun during march; order to load and order to halt; how to sight and fire during halt; observation of the burst and correction of fire; execution of the order, "Cease fire."

Section 5. Observation, Estimation of Distances, and Indication of Targets (Crew -- 2 hours; Self-Propelled Gun Unit Commanders, Section Commanders and Loaders -- 2 hours)

Lesson 1. How to observe targets from the self-propelled gun during a march and how to determine range; and how to estimate range by the degree of visibility, by size of the surface object, and by angular value.

Lesson 2. Observation of targets, search for targets, and determination of distances to targets during march.

Subject 4. Firing from a Defiladed Fire Position (Crew -- 12 hours; Self-Propelled Gun Unit Commanders, Section Commanders and Loaders -- 10 hours)

Lesson 1. General principles on masked firing position and various requirements arising from it; and special duties of crew members during execution of the orders, "Prepare for combat" and "Cease fire."

Lesson 2. Actions of the section commander using a sight; how to adjust traverse, level, and rear sight according to transmitted sight number; how to change the setting in accordance with transmitted sight number and how to read the measured value.

Lesson 3. General principles on sighting and orientation; operation of traverse; selection of aiming point and various requirements arising from the aiming point; orientation and sighting by collimator; determination of the value of P'YOGAK*; sighting errors committed by section commanders.

Lesson 4. General principles on the elevation adjustment; operating the elevating mechanism; how to set the level and rear sight equipment as ordered; how to adjust the level, how to exclude the influence of the expulsion slope (TN Sic.); and sighting errors committed by section commanders.

Lesson 5. Section commanders training on simultaneous traverse and elevation adjustment.

Lesson 6. Occupation of firing positions; how to place the self-propelled gun in firing position; disposition of self-propelled gun in firing positions; execution of the order, "Prepare for combat"; setting up and camouflaging firing positions; execution of the order, "Cease fire"; and order of evacuating the firing positions.

Lesson 7. Preparing to fire the self-propelled gun from covered firing positions; how to set an aiming post; how to accomplish initial laying of the self-propelled gun by means of the aiming post; orientation by aiming point; how to measure traversing angle between primary and alternate aiming points.

Lesson 8. How to accomplish initial direction of the self-propelled gun by azimuth and traverse.

Lesson 9. General principles on minimum rear sight setting; determination of distances to the top of the mask, and rear sight equipment; minimum rear sight setting by initial lay and by the lower line of the bore; general principles on the minimum rear sight setting already made.

Lesson 10. Firing from a covered fire position; preparing to fire the self-propelled gun; firing orders (single round, "methodical fire," and "rapid fire), order for launching fire and its execution; changing orders and eliminating errors in equipment; shifting from primary and alternate aiming points; suspension of fire; how to record targets after the completion of fire; and refiring at the targets recorded.

Note: Lessons 6 and 10 will be executed by the gun crew.

Subject 5. Sniping

Submachine Gun

Lesson 1. Preparing to fire from the prone, kneeling, and standing positions; how to rest the butt on the shoulder; and how to pull the trigger.

Lesson 2. Firing practice.

Light Machine Gun

Lesson 3. Preparing to fire from various positions; how to rest the gun butt on the shoulder; and how to pull the trigger.

Lesson 4. Firing practice.

Pistol (Nagant Pistol)

Lesson 5. How to handle the pistol (Nagant pistol) during fire; preparing to fire from the standing position; and how to aim and pull the trigger.

Lesson 6. Firing practice.

VI. Artillery KUBUNDAE, Mortar KUBUNDAE, Engineer KUBUNDAE, Signal KUBUNDAE, and Chemical Defense KUBUNDAE

Subject and Allocation of Time

Subject Number	Title	Hours
	First Phase	
	One-Year Soldiers	
1	Firing the Submachine Gun at Stationary Targets; and the Structure of the Carbine	50
	Total	50

Subject Number	Title	Hours
	Second Phase	
2	All Soldiers	10
	Total	10

First Phase

Subject 1. Firing the Carbine at Stationary Targets; and the Structure of the Carbine -- 50 hours

Same as Subject 1 for riflemen and submachine gunners.

Second Phase

Subject 2. Firing the Carbine at Stationary Targets -- 10 hours

Section 1. Structure of the Carbine -- 3 hours

Lesson 1. Inspection of the carbine in the assembled and disassembled states.

Lesson 2. Condition of all parts and equipment of the carbine prior to loading; and their function during loading, firing, and unloading and when setting the carbine at safety.

Section 3. How to Fire the Carbine and Firing Regulations -- 7 hours

Lesson 1. How to load, unload, reload, and fully load the carbine either from the standing or sitting positions with support.

Lesson 2. Preparing to fire and loading the carbine from the standing position; preparing to fire, sighting, pulling the trigger, ejecting the cartridge, and unloading.

Lesson 3. Preparing to fire from the prone position, loading, adjusting the rear sight, sighting, pulling the trigger, and ejecting the cartridge and unloading.

Lesson 4. Firing from the prone, kneeling, and standing positions with support.

Lesson 5. Firing practice.

VII. Security KUBUNDAE

Subjects and Allocation of Time

Subject Number	Title	Hours
	First Phase	
1	Firing the Submachine Gun at Stationary Targets; and the Structure of the Carbine	60
	Total	60

Subject Number	Title	Hours
	Second Phase	
2	Firing the Carbine at Stationary Targets	32
3	Firing the Light Machine Gun at Stationary Targets	18
	Total	50

First Phase

Subject 1. Firing the Submachine Gun at Stationary Targets; and the Structure of the Carbine -- 30 hours

Same as Subject 1 for riflemen and submachine gunners.

Second Phase

Subject 2. Firing the Carbine at Stationary Targets -- 32 hours

Same as Subject 7 for riflemen and submachine gunners.

Subject 3. Firing the Light Machine Gun at Stationary Targets -- 18 hours

Same as Section 1 of Subject 3 for light machine gunners.

Chapter 4. Special (Technical) Training

I. Artillery and Mortar KUBUNDAE

A. Structure of Gun (Mortar), and Ammunition

1. Purpose of study

a. To thoroughly familiarize specialists with the structure of a gun (mortar) and its ammunition.

b. To train troops in proper operation, care and maintenance of equipment.

c. To enrich veteran soldiers' knowledge of structure of gun (mortar) ammunition and familiarize them with the artillery (mortar) commander's work in preparing gun (mortar) and ammunition for firing.

2. Instruction on methods

a. Studies relating to the structure and ammunition will be carried out in a lecture hall specially prepared for artillery commanders and for the studies. The study will be facilitated with models for practice in disassembly and assembly and trouble shooting for eliminating troubles. The artillery (mortar) commanders will conduct the lessons. The qualified veteran soldiers may assist gun (mortar) commanders in training recruits.

b. In the early stage of the lesson, the one-year soldiers will be taught the general structure, care and maintenance to attain adequate proficiency to maintain the KUBUNDAE in constant combat readiness.

In later training, soldiers will be trained to master the duties of each crew position during march, fire, and combat (for example, trouble shooting during march and firing).

c. Soldiers must be trained to handle the equipment carefully. The trainees must be explained the procedure for trouble shooting and the consequences of minor trouble.

d. The training in the procedure for cleaning and lubricating guns will be carried out through practice. Therefore, all the instructions in the technical handbook must be observed. The habit of proper care and maintenance of equipment must be formed during the special classes and in KUBUNDAE through proper instructions.

e. During the study of ammunition, special attention must be directed to train soldiers to form the habit of loading and firing shells (mortar shells) rapidly while observing all safety measures. Soldiers must be made aware of the necessities of loading shells (mortar shells) free from oil, dirt and rust.

f. Regulations governing equipment, ammunition and their operation and handling procedure must be studied not only in the special classes but in all the tactical training courses in firing as well.

Subjects and Allocation of Time

Subject Number	Title	Hours		
		Reconnaissance troop	Bn & regtl arty gunners	Bn & regtl mortar gunners
	First Phase			
	One-Year Soldiers			
1	General Description of the Structure of a Gun (Mortar) and Its Care	6	6	6
2	General Description of Ammunition	4	4	4
	Total	10	10	10
	Veteran Soldiers			
3	Recoil Mechanism	-	8	-
4	Structure of Fuze	-	4	-
5	Understanding of Gun (Mortar) Commander's Duties during Preparation of Gun (Mortar) and Ammunition for Firing	-	8	8
	Total	-	20	8
	Second Phase			
	All Soldiers			
6	Structure of Gun (Mortar) Components and Their Care	-	32	22
7	Structure of Ammunition	-	8	8
	Total	-	40	30

First Phase

Subject 1. General Description of the Structure of a Gun (Mortar) and its Care

Lesson 1. Demonstration of gun (mortar) constituting PUDAE armament; basic tactical -- technical capabilities and mission of gun (mortar); transportation equipment and methods of transportation.

Lesson 2. General structure of a gun (mortar); basic component and equipment and their function; general structure of a collimator (sight); accessories, portable engineer tools and their loading.

Lesson 3. Daily care and maintenance; of parts maintenance procedure in ordnance depot daily care of a gun (mortar); accessories for cleaning and lubricating, procedure for cleaning and lubricating various parts and accessories of a gun (mortar).

Subject 2. General Description of Ammunition

Lesson 1. General structure of ammunition and their function; classification of shells, variety of shells (mortar shells) and their purpose and function.

Lesson 2. General structure of a shell (mortar shell); structure, principle and function of fuze; loading equipment and firing mechanism.

Subject 3. Recoil Mechanism

Lesson 1. Structure of counter-recoil mechanism, i.e. cylinder, control rod, oil regulating rod, oil seal and replenisher.

Lesson 2. Structure of counter-recoil mechanism, i.e. cylinder, "transformation equipment," counter-recoil cylinder and oil seal.

Lesson 3. Function of recoil mechanism through a cycle.

Lesson 4. Inspection of recoil equipment; measuring oil level in the recoil and counter-recoil mechanism; measuring the pressure within the counter-recoil mechanism.

Subject 4. Structure of Fuze

Basic components of fuze; i.e. detonating device, revolving-safety device, delay element, supplementary safety mechanism function and structure of components.

Subject 5. Understanding of Gun (Mortar) Commander's Duties During Preparation Gun (Mortar) and Ammunition for Firing

Lesson 1. The gun (mortar) commander's duties during the preparation for march with guns (mortars), at the time of discovery of troubles and elimination of trouble.

Lesson 2. Gun (mortar) commander's duties during the inspection of sight, and adjustment of sight and level.

Second Phase

Subject 6. Structure of Gun (Mortar) Accessories and Their Care

For artillery KUBUNDAE

Lesson 1. Function and structure of gun barrel; visual inspection of gun barrel and rifling; inspecting the tube mount recoil mechanism and counter-recoil mechanism.

Lesson 2. Function and structure of a bolt and semi-automatic mechanism; structure of bolt and semi-automatic procedure for assembling and disassembling breech, cleaning and lubricating a breech assembly.

Lesson 3. Inspection of various parts when the breech is closed; function of various parts of breech when opened; function of various parts of breech when closed and when the gun is fired; functions of semi-automatic mechanism and breech during recoil and counter-recoil.

Lesson 4. Function of a cradle and its structure; locking of the cradle to the top carriage and mounting the tube; recoil index and scale; maximum recoil and standard recoil; care of cradle; function of recoil machanism; operating principles of recoil and counter-recoil mechanism; trigger group and its function.

Lesson 5. Function and structure of sight. Function and structure of elevation level, cross level, elevating mechanism and range disk of sight; collimator (optical sight) and its basic parts. Installing collimator (optical sight) to a gun; care and maintenance of fire control equipment.

Lesson 6. Function and structure of top carriage; mounting top carriage to bottom purpose, structure and function of the elevating and traversing mechanism and counterbalance mechanism, inspection of top carriage and detection of troubles in the traversing mechanism; malfunction and repair; cleaning and care of top carriage.

Lesson 7. Function and structure of the bottom carriage; inspection of axle and gear, gear disengaging system, shield and wheels, and determination of troubles; regulations on cleaning and care of carriage.

Lesson 8. Preparation and security during march; the binding of portable engineer tools; the packing of ammunition and accessory kit; hitching a gun to a prime mover and inspection of the top carriage for march; security during march; disposition and inspection of equipment during halt.

Lesson 9. Permissable speed of a prime mover towing a gun; regulations on overcoming a steep grade and natural obstacles descending steep grade.

For mortar KUBUNDAE

Lesson 1. Structure of mortar tube; basic component of tube; structure of barrel cap, procedure for disassembling and assembling barrel cap.

Lesson 2. Structure of firing mechanism; function of firing mechanism; installing firing pin and setting the striker for lever and drop fire; disassembly and assembly of firing device.

Lesson 3. Function and structure of the mortar mount and components; function of various components; disassembly and assembly of components; possible troubles and repair; structure of traversing mechanism (elevating mechanism).

Lesson 4. Function and structure of shock absorber; function of shock absorber during fire; assembly and disassembly of a shock absorber possible troubles in the shock absorber and repair; structure of base plate; procedure for disassembly of mortar into loads.

Lesson 5. Structure of mortar sight; trouble and repair of the sight protection and care of sight.

Lesson 6. Structure and function of safety mechanism; assembly and disassembly of a safety mechanism; installing safety mechanism to a mortar tube; cleaning, lubricating and inspecting the safety mechanism.

Lesson 7. Mortar and ammunition cart; functions and structure of cart and limber, quantity of mortar shells carried by the limber;

structure of mortar ammunition; methods of transporting mortars without wheels; pack saddle hanger and its structure; preparation of pack horse for transportation; functions and structure of spare parts and accessories.

Lesson 8. Preparation of mortars for march and inspection of mortars during march.

The contents are the same as Lesson 8 for artiller· KUBUNDAE.

Subject 7. Structure of Ammunition

Lesson 1. Purpose and structure of shells (mortar shells); basic components of shells (mortar shells); special shells (mortar shells), their structure and application; markings on shells (mortar shells); weight, marking and classification of shells (mortar shells).

Lesson 2. Purpose and shape of propellant; types of propellant; purpose of cartridge and detonator (ignition powder); inspection of detonator (ignition powder) prior to loading.

Lesson 3. Markings on fuze; structural principles and function of fuze; setting the fuze for impact and delay action; regulations on handling fuze at the time of fire.

B. Observation and Fire Control Equipment

1. Purpose of study:

a. To familiarize soldiers with the function and the general structure of artillery fire control equipment.

b. To familiarize reconnaissance men with the function structure and use of equipment under varying conditions.

Veteran soldiers will be thoroughly familiarized with the structure and use of equipment through the exercises.

2. Instruction on handling procedure

a. The study of each equipment must begin with the explanation of its function structure, handling procedure and maintenance. Then, the operating principles must be demonstrated and explained, and practice in operation be conducted.

b. During the study in structure of equipment the soldiers must not be taught in more detail than necessary. They must be taught only the problems which are required in the actual operation and care of the equipment. While trainees are working with equipment in the preliminary stage of the lesson, they must be trained not to force, the equipment but must be thoroughly trained in locating and eliminating the causes of malfunction which hampers smooth operation.

c. During the training, special attention must be directed to regulations on the use of equipment.

In initial drills, accuracy must be emphasized over speed. In later training when trainees have acquired sufficient skill in the use of equipment, efforts must be made to attain speed. In all cases, hasty operation of equipment will not yield desired result. Studies in the use of equipment must conducted through field training.

Subjects and Allocation of Time

Subject Number	Title	Hours	
		Reconnaissance men	Gunners
	First Phase		
	One-Year Soldiers		
1	General Description of On-Carriage Optical Instruments	2	2
2	General Description of the Structure of Theodolite and Goniometer	2	2
3	Compass	1	1
4	Prism Binocular	2	2
	Total	7	7
	Veteran Soldiers		
5.	Structure of Battery Commander's Telescope and the Use of Battery Commander's Telescope at the Observation Post	6	-
6	Structure of Periscopic Aiming Circle and the Use of Aiming Circle at the Observation Post and Firing Position	6	8
	Total	12	3
	Second Phase		
	All Soldiers		
7	Observation Telescope	2	-
8	Function and Structure of Aiming Circle	16	-
9	Structure and Use of Battery Commander's Telescope	14	-
10	Instruments Plotting	4	-
	Total	36	-

Note: Veteran soldiers - gunners will study Lessons 1 - 5 of Subject 8 in place of Subject 6.

First Phase

Subject 1. General Description of On-Carriage Optical Instruments

Types of instrument and their function; general characteristics of the instruments; general structure of battery commander's telescope,

aiming circle and observation telescope; procedures for observation and measuring angle of traverse; reading and recording angles by means of goniometer graduation.

Subject 2. General Description of the Structure of Theodolite and Goniometer

Use of theodolite in artillery; general description of the structure of goniometer; concept of the mil system; relationship between goniometer graduation and degrees.

Subject 3. Compass

Function and structure of a compass; procedures for carrying, and care of compass; the four cardinal points and determination of azimuth.

Subject 4. Prism Binocular

Function and structure of binocular; focusing the binocular and adjusting the interpapillary distance; procedure for handling and care of binocular; typical troubles of binocular; procedure for observation and measurement of horizontal angle.

Subject 5. Structure of Battery Commander's Telescope and the Use of Battery Commander's Telescope at the Observation Post

Lesson 1. Structure of optical assembly; objectives and eyepiece, and coupled azimuth scale.

Lesson 2. Inspection of the battery commander's telescope and preparation for use.

Lesson 3. Exercises in the use of a battery commander's telescope at an observation post.

Subject 6. Structure of Periscopic Aiming Circle and the Use of Aiming Circle at the Observation Post and Firing Position

Lesson 1. Structure of aiming circle; the functions of mechanical parts for the measuring horizontal angle.

Lesson 2. The parts of an Periscopic aiming circle; adjustment of aiming circle; inspection of aiming circle and the preparation for use.

Lesson 3. Exercise in the use of an aiming circle at the observation post and the fire position.

Second Phase

Subject 7. Observation Telescope

Function and structure of observation telescope; procedure for handling and care of observation telescope; measurement of azimuth and angle of site.

Subject 8. Function and Structure of Aiming Circle

Lesson 1. Function and structure of aiming circle; procedure for packing, and transporting aiming circle; troubles and repair of aiming circle; care and preservation of aiming circle.

Lesson 2. Preparation for use of aiming circle: setting up a tripod; mounting the aiming circle on a tripod; inspection of aiming circle prior to use; how to install aiming circle, method of orientation and measuring azimuth angle; the structure of instrument light.

Lesson 3. Determination of the azimuth angle of a given direction; the determination of the azimuth angle of the target (reference point).

Lesson 4. Finding a target by a designated azimuth; the measurement of horizontal angle and angle of site.

Lesson 5. The determination of an azimuth angle of a base piece (mortar) aimed at the target or to the reference point.

Lesson 6. Assignment of direction to the base piece (mortar) by azimuth angle.

Veteran soldiers will be taught the procedure for installing aiming stakes by azimuth.

Subject 9. Structure and Use of Battery Commander's Telescope

Lesson 1. Function and structure of a battery commander's telescope; structure of mounts and illumination accessories; setting up a battery commander's telescope; troubles and repair of battery commander's telescope; procedure for packing and transporting battery commander's telescope; care and preservation of battery commander's telescope.

Lesson 2. Setting up and orienting a battery commander's telescope and measurement of angle of site and horizontal angle.

Lesson 3. Using battery commander's telescope to indicate and search for targets.

Lesson 4. Procedure for observing of shell bursts with the battery commander's telescope; determining the deviation of burst on the basis of its direction and altitude.

Lesson 5. Preparing battery telescope for night operation and operation of battery telescope at night.

Subject 10. Slotting Instruments

Lesson 1. Function and structure of celluloid protractor and square; the use of celluloid artillery protractor and square.

Lesson 2. Coordinate guage, its function and structure; method of determining the coordinates of points and the method of entering the points on the map (plotting board); protection of celluloid equipment.

Lesson 3. Goniometer, its function and structure; measurement of horizontal angle by goniometer and its front sight; measurement of distance and extension of distance on graph.

C. Firing Practice

1. Purpose study:

a. To train soldier to perform his duties in his assigned crew position in operation of gun (mortar).

b. To train the gunners to take proper action prior to commencing firing and during fire in firing at will or platoon fire.

c. To familiarize the men on the artillery (mortar) commanders' duties in conducting fire from open and covered firing positions.

2. Instruction on methods

a. In conducting firing practice, the study of structure of gun (mortar) components, ammunition, and other equipment must be conducted prior to training in operation. The study must be combined with corresponding subjects on the study of the structure of guns and ammunition. Before tactical study is given outdoor, soldiers must be given basic training in maintaining gun and mortar ready for combat, laying the gun (mortar) and others. In tactics classes soldiers must strive to improve and perfect their skill they have acquired in firing practice.

b. Classes must be provided with the equipment designated in the table of organization and equipment, with training ammunition, portable engineering tools and other necessary materials. Classes mentioned above must be conducted at an artillery unit compound or outdoors.

c. In the first lesson, Subject 1, schedule for veteran soldiers will be used to demonstrate to recruits, the action of gunners at their gun (mortar) station. The demonstration of executing each command will be shown by the number with necessary explanation and repeated at normal speed. In later classes, the crew's action at the gun (mortar) station must be demonstrated to the recruits.

As the gunners acquire the knowledge and skill their position in crew must be rotated to facilitate all-around training.

d. During the study of Subject 4 soldiers must be thoroughly study each duty and familiarized with duties at all crew positions of gun (mortar).

e. Lessons in Subjects 2, 3, 5 and 6 must be conducted outdoors or at a rifle range. To develop the crew's capacity to think and to perfect their skill and develop physical endurance to man the guns and adaptability to sudden changes in situation during firing exercise (sudden change in the firing front, repulsion of a surprise charge by tanks, prompt change of firing positions under enemy fire, etc).

f. Veteran soldiers will be employed in recruit training on individual basis (field problems).

Subjects and Allocation of Time

Subject Number	Title	Hours		
		For reconnaissance men	For gunners	
			Bn and regtl arty	Bn and regtl mortar
	First Phase			
	One-Year Soldiers			
1	Crew's Action at a Gun (Mortar)	6	6	6
	Total	6	6	6

Subjects and Allocation of Time (Cont'd)

Subject Number	Title	Hours		
		For reconnaissance men	For gunners	
			Bn and regtl arty	Bn and regtl mortar
	Veteran Soldiers			
2	Duties of Gun Commander and Observer during Preparation for Fire from Open Position	-	32	-
3	Duties of Gun Commander and Observer during Fire from Position	-	-	26
	Total	-	32	26
	Second Phase			
	All Soldiers			
4	Crew's Action at Gun (Mortar) Position	-	34	28
5	Firing from an Open Position	-	28	12
6	Firing from a Covered Position	-	-	32
	Total	-	62	72

First Phase

Subject 1. Crew's Action at a Gun (Mortar)

Setting up a gun (mortar) at a firing position; disposition of crews at the gun (mortar); positions and mission of crews; execution of the command "Prepare for combat" and "Cease fire"; each crew's duty during the execution of the commands "Remove A-frame", Prepare for combat," "Cease fire", and "Shoulder A-frame".

Subject 2. Duties of Gun Commander and Observer During Preparation for Fire from the Open Position

Lesson 1. Duties of gun commander during occupation of and withdrawal from a firing position.

Lesson 2. Duties of gun commander at firing position prior to commencement of firing.

Lesson 3. Duties of gun commander and observer during firing against stationary targets.

Lesson 4. Duties of gun commander and observer during firing against approaching tanks.

Lesson 5. Duties of gun commander and observer during fire against tank moving obliquely.

Subject 3. Duties of Gun Commander and Observer During Fire from Covered Position

Lesson 1. Duties of mortar commander during occupation of and withdrawal from firing position.

Lesson 2. Duties of mortar commander prior to commencement of fire.

Lesson 3. Launching mortar fire against stationary targets from a covered position when the mortar is in the immediate vicinity of an observation post.

Lesson 4. Duties of mortar commander and observer during platoon fire; occupation of fire position and combat preparation of a platoon; laying parallel sheaf by plotting procedure for conducting platoon fire; execution of fire command; making entries in the mortar commander's log.

Lesson 5. Duties of mortar commander and observer during platoon fire against various targets; occupation of firing position; laying parallel sheaf by using distant reference points; slow fire, rapid fire, preparation fire and barrage; shifting from one type of fire to another.

Lesson 6. Duties of mortar commander and observer during night fire; occupation of a platoon fire position during night; preparation for mortar fire; laying parallel sheaf astronomically; platoon fire against illuminated and on the non-illuminated targets; withdrawal from firing position.

Second Phase

Subject 4. Crew's Action at a Gun (Mortar) Position

Lesson 1. Ammunition man and gunner action; duties in executing of commands "Prepare for combat" and "Cease fire"; preparation for firing shells (mortar shells), propellent and charges; setting fuze; propellent increment; method of delivering shells (mortar shells) to the fuze setter or to the loader; packing unused shells (mortar shells) into a box and propellent and spent cartridges.

Lesson 2. Loader's duty in executing of the commands, "Prepare for combat" and "Cease fire"; receiving shells (mortar shells) from an ammunition man or from a fuze setter; inspection and report on shells (mortar shells); loading; effect of loader's error in accuracy of fire; preventive measure against double loading of a mortar; observation of the function and setting safety mechanism.

Lesson 3. (Not for mortar KUBUNDAE.) Gunner's action in executing the commands "Prepare for combat" and "Cease fire"; inspection of breech block and function of semi-automatic mechanism; inspection of the recoil and counter-recoil of barrel; report on the amount of recoil; actions to take when shells misfire and when ejector malfunctions; effect of gunner's error in accuracy of fire.

Lesson 4. Observer's action in executing the commands, "Prepare for combat" and "Cease fire"; installing collimator-sight on a gun (mortar); installing a theodolite and rear sight by the numbers; changing the theodolite and the rear sight; installing the level of a collimator and a reflector; how to read the rear sight; elimination of malfunction.

Lesson 5. Laying a gun by its barrel (by the bore axis in case of a mortar); laying a gun (mortar) by azimuth.

Laying a gun (mortar) by utilizing observation instruments and reference points; errors in laying caused by observer.

Lesson 6. Installing sight; operating elevating mechanism; laying a gun (mortar) directly by using a level; causes of inaccurate laying.

Lesson 7. (Not for mortar KUBUNDAE.) Principle of direct laying; installing the goniometer, reflector and rear sight during direct sighting; laying a gun; fire correction by observing orienting shell bursts.

Lesson 8. Principle of indirect laying; installing theodolite, level and rear sight by the numbers; how to direct a gun (mortar) to a target by utilizing the sighting point; orientation; pointer's report after orientation.

Subject 5. Firing from an Open Position

Lesson 1. Occupation of and withdrawal from a firing position; techniques during direct contact with the enemy and during occupation of the firing position; crew's disposition and action in moving a gun (mortar) from a covered trench to a firing position; withdrawal from a firing position.

Lesson 2. Activities in a firing position prior to commencement of fire; advance preparation for in a firing position; setting up a gun (mortar) and the disposition of prime movers in an open position; preparation for fire; preparation and camouflage of an entrenchment and cover for prime mover; preparation of a gun (mortar) for instant action.

Lesson 3. Firing against stationary targets; occupation of firing position; understanding the action involved in firing a gun (mortar) and firing; procedure; study of the fire sector; preparing firing data; laying a gun (mortar); execution of command "open fire"; conducting trial fire after relaying or target change; orientation; conducting rapid fire; suspension of fire.

Lesson 4. (Not for mortar KUBUNDAE.) Firing at tanks; direct fire; selection of azimuth target and determination of range; identification of tank, the type determination of lead and range.

Weaknesses of tanks and self-propelled guns; the commands, "open fire" and "sustain fire"; observing the effects of fire.

Veteran soldiers will be trained to compile anti-tank firing chart and the method of indicating targets.

Lesson 5. (Not for mortar KUBUNDAE.) Firing at advancing tanks; methods indication of a target; preparing initial firing data; selection of target and laying on tanks; estimating the effect of wind on trajectory; execution of the command, "open fire" and "sustain fire"; determining the time for opening fire; firing at tanks.

Lesson 6. (Not for mortar KUBUNDAE.) Firing at crossing tank; methods indication of targets; preparing initial firing data; preparing guns and ammunition; execution of the command "open fire"; procedures for determining the lead firing; zeroing in and waiting for a target.

Lesson 7. (Not for mortar KUBUNDAE.) Firing at a tank moving obliquely; indication of targets; preparing initial firing data; preparing guns and ammunition; procedures for determining the lead; determining the time for opening fire; execution of the command, "open fire" and "sustain fire"; zeroing in and waiting for a target.

Lesson 8. Firing at moving live targets; occupation of firing position; preparing guns (mortars) and ammunition for fire; preparing initial firing data at each phase line; laying a gun (mortar) on a target indicated by azimuth or a surface object; execution of the command "open fire" and "sustain fire"; orientation; shifting fire.

Lesson 9. Firing at tank component of platoon; firing position; preparing initial firing data for guns, ammunition and fire; firing signal; concentrating fire on a tank; shifting concentrated fire from one target to another; firing simultaneously at two targets.

Subject 6. Firing from a Covered Position

Lesson 1. Occupation of and withdrawal from a firing position; procedure for advancing and occupying firing position; execution of commands during the occupation of firing positions; preparing mortars for instant action; concealing prime movers in a covered trench; execution of command during the withdrawal from a firing position; call for a prime mover and withdrawal from a firing position.

Lesson 2. Activities in firing position prior to commencement of fire; occupation of a firing position; preparating mortar and ammunition; method of installing aiming stakes; selection of reference points; preparing initial firing data using reference points (surface object); laying mortar in base direction.

Veteran soldiers will be given training in selecting firing positions and sites for observation posts by using maps and determining P'YOGAK* by using.

Lesson 3. Mortar fire against stationary target; occupation of fire position and preparation for firing; laying a mortar; command "open fire" and its execution; execution of command during single round firing, slow and rapid fire; countermanding a command record of equipment based on targets. (TN Sic.)

Lesson 4. Preparation for and launching of mortar platoon fire against wide stationary target; occupation of firing position; preparation for firing; assignment of basic direction to the base piece; laying parallel sheaf by plotting; execution of commands "open fire" and "sustain fire" against wide stationary target.

Lesson 5. Mortar platoon fire against a pillbox; occupation of a firing position; fire preparation; assignment of basic direction to the base piece; laying parallel sheaf by use of far reference point; executing commands during trial fire and during concentrated fire.

Artillery Fire Training

1. Purpose of study:

a. To familiarize soldiers with the general knowledge of explosives used in artillery, the firing and trajectory of shells, (mortar shells), and cone of dispersion of shells (mortar shells).

b. To train the reconnaissance men in the procedure for observing shell bursts to transmit target instructions accuracy and promptly, receiving and to determine distances by estimation, and to prepare firing data.

The veteran soliders will become profficient in transmitting target instruction, preparing initial firing data, and conducting trial fire.

2. Instruction on method

a. Soldiers must proceed to the study of artillery fire training after they have acquired the fundmentals of the structure of gun, ammunition and equipment. In other words, general structure of a gun (mortar) and ammunition must be taught to soldiers before they study the subject "General Description of Artillery Fire," and soldiers must acquire the proficiency in the use of binocular before they study the subject "Determinating Distances by Estimation and Measuring Horizontal Angle."

b. Lessons in determining distances by estimation will be carried out in an area prepared in advance. When explaining the procedures for determining a distance by estimation, the fact that the determining the subject must be emphasized as being the most important in all artillery operations.

c. Lessons in Subjects 3 and 7 must be prepared in advance, in accordance with the problems to be studied in the classes. The lessons must be given in well-equipped classes, and individual target should be used or the target must be indicated with MAKET'U* to facilitate the study.

In the course of study, the problems of transmitting target instruction must be made progressively difficult (such as making the condition, limited visibility, the distance, and the identities of the target more difficult). In all classes soldiers must carefully study the indicated targets, and request simple and clear target instructions from the person transmitting instructions.

d. During the study of Subject 9, the soldiers must be trained to apply consciously various methods by which the initial firing data are prepared. To do this, the superiority of different method applied in a given situation must be demonstrated, and the existing procedures for preparing data must be demonstrated.

Studies by recruits on preparation for initial firing data must begin with the study of essentials. For instance, when the method of preparing data by use of a compass and aiming circle is studied; soldiers must first be taught how the base line and P'YOGAK* are determined. After the soldiers grasp these problems, the soldiers may continue to study methods of determining the distance between command post and target (the distance between the target and the gun). Veteran soldiers must train separately in preparation of initial firing data, and efforts must be made to train veteran soldiers to do accurate and rapid computation.

The correct solutions to problems must not be given in advance to soldiers during training in methods of preparing data by computation. Soldiers must also be trained in the application of prepared formulas. The value used in the formula must be explained to the soldiers at the model artillery firing range by using actual object and sketches.

During training, soldiers will make actual computation and master the method of recording the result of the computation. Then the time spent for preparing firing data may be progressived reduced.

Classes for these subjects must be conducted either in the field or in a model firing range.

e. In the first class for the study of the lesson "Observation of shell burst", the burst of all types of shells (mortar shells) must be demonstrated by use of visual aids. Next the appearance of bursts sensed shells which over and short of the target must be demonstrated. The explanation on the appearance of shell bursts must be given in the field or in a model firing range, and model equipment must be used to facilitate the explanation.

The next study on observation of burst is training in range sensing followed by deviation sensing.

During classes the soldiers must be trained not only in accurate evaluation of bursts, but also in reporting the results of the observation according to designated procedure.

After the soldiers have acquired proficiency in the observation of bursts in the model artillery firing range, they must carry out firing practice in the field by making use of available model equipment and rifle firing range. Actual firing must be conducted to improve the soldier's proficiency in the observation of bursts.

F. The training of soldiers in estimation of distance target indication, and preparation of initial firing data must be carried out not only in class rooms but in artillery field training also.

Subjects and Allocation of Time

Subject Number	Title	Hours		
		For reconnaissance men	For gunners	
			Bn and regtl arty	Bn and regtl mortar
	First Phase			
	One-Year Soldiers			
1	General Description of Artillery Fire	10	10	10
	Total	10	10	10
	Veteran Soldiers			
2	Practice on Target Indication	4	4	4
3	Preparing Initial Firing Data by Estimation of Range With or Without Optical Equipment	10	--	10

Subjects and Allocation of Time (Cont'd)

Subject Number	Title	Hours		
		For reconnaissance men	For gunners	
			Bn and regtl arty	Bn and regtl mortar
4	Procedure for Direct Laying on Stationary and Moving Targets	6	12	--
5	Adjusting Fire on Stationary Targets and Sensing	14	--	20
	Total	34	16	34
	Second Phase			
	All Soldiers			
6	Estimation of Range and Measurement of Horizontal Angle	9	6	6
7	Target Indication	10	4	4
8	Sensing	8	--	--
9	Preparation of Initial Firing Data by Estimation	29	--	--
	Total	56	10	10

First Phase

Subject 1. General Description of Artillery Fire

Lesson 1. Explosives; general concept of explosives and their functions; radioactive explosives and their application in artillery.

Lesson 2. General concept of artillery fire; the effect of propellent gas on the gun barrel rifling, its function and harmful effects; velocity; relationship between charge, shell (mortar shell) velocity.

Lesson 3. Trajectory; forces which affect the trajectory of shells (mortar shells); various factors of trajectory; spin of shells; stability of mortar shells in flight; subordination; drift of projectile.

Lesson 4. Types of shells (mortar shells) and their function; impact and delay action; general description of KAMUP'ULET'U* and ricochet ballets; fragmentation and explosive action; purpose of armor-piercing shells, special armor-piercing shells, and armor-piercing incendiary shells.

Lesson 5. General description of cone of dispersion of shells (mortar shells); principles of dispersion, size characterizing the dispersion.

Subject 2. Practice in Fire Control Procedures for Transmitting Fire Control Directions Based on Base Line, Reference Points and Maps

Subject 3. Preparing Initial Firing Data by Estimation of Range With or Without Optical Equipment

For the crews of mortar KUBUNDAE.

Lesson 1. Method of preparing firing data by estimation of range when the target is visible from the firing position.

Lesson 2. Preparing firing data by triangulation using the target, commanding officer and mortar as the three points.

For reconnaissance men.

Lesson 1. Practice in preparing initial firing data by estimation of range and azimuth using a compass.

Lesson 2. Practice in preparing initial firing data by estimation of range with the aid of the graduated azimuth dial of the aiming circle (battery commander's telescope).

Subject 4. Procedure for Direct Laying on Stationary and Moving Targets

Lesson 1. Firing at stationary targets; method of estimating distance and method of selecting shells and fuzes according to the nature of targets; procedure for trial fire for direction and distance; method of correcting fire by orientation of burst to reference points; procedure for shifting to fire-for-effect and procedure for conducting fire-for-effect; firing for signs showing registration of hit; procedures for transmitting commands "open fire" and "sustain fire".

Lesson 2. Firing against moving target; general concept of maximum and direct fire ranges; determination of range and selection of shells and fuzes according to the nature of targets; determining the amount of lead and reference point by the speed and direction of target movement; initial lay of the goniometer and sight; procedure for trial fire for deviation and distance; procedure for transmitting commands "open fire" and "sustain fire".

Subject 5. Adjusting Fire and Observation of Burst on the Stationary Target

Practice in conducting adjusting fire and observation of bursts (by utilizing model equipment).

Second Phase

Subject 6. Estimation of Range and Measurement of Horizontal Angle

Lesson 1. Causes affecting the accuracy of the determination of distance; method of determining the distance by estimation in accordance with the visibility of surface objects; determination of horizontal angle; measurement of distance by direct survey; pacing.

Lesson 2. Estimating distance by comparing known distance with unknown distance.

Lesson 3. Determination of distance on the basis of angle of surface objects and their silhouette.

Subject 7. Target Indication

Lesson 1. Target indication and its purpose; indicating targets by training optical equipment on the target; understanding the targets by the person receiving the target indication; report on the understanding of targets.

Veteran soldiers will be given additional training in the method of indicating targets in reference to the base line.

Lesson 2. Selection of reference point; rough sketch of reference points, target indication by reference points and surface objects.

Veteran soldiers will be trained in the method of indicating targets by maps.

Lesson 3. Target indication when persons sending and receiving are located in different observation posts (the target indication will be carried out without changing procedures); target indication by dispatching reconnaissance patrol.

Veteran soldiers will be trained in the procedures for indicating targets by use of different data.

Subject 8. Sensing

Lesson 1. General rules and action on sensing; study of terrain in the target area; deviation sensing; methods of sensing deviation and range with binoculars; shell sensed short and over; observation of bursts when the wind is blowing.

Lesson 2. Sensing; characteristic burst of erratic shell; faulty burst and dud; evaluation of errors in deviation and range; reporting and recording the results of observation.

Lesson 3. (Only for gunners); methods of sensing ricochet burst; method of sensing bursts against tanks and embrasures.

Subject 9. Preparation of Initial Firing Data by Estimation

Lesson 1. Preparation of firing data by estimation when the target is visible from the firing position.

Lesson 2. Preparation of firing data by the triangulation using the target, commanding officer, and gun (mortar) as the three points.

Lesson 3. Preparation of firing data by the triangulation using the target, gun and sighting point as the three points.

Lesson 4. Preparation of data by use of aiming circle.

Lesson 5. Purpose of adjusting fire; method of bracketing the target; creeping method of adjustment bracket; insuring narrow bracket, fire for effect.

II. Self-Propelled Gun KUBUNDAE

A. Technical training

1. Purpose of study:

a. To train the crew in the proper operation of vehicles, in the full utilization of their technical capabilities and in the procedures for encuncing constant combat readiness.

b. To train the crew in the skill of maintaining vehicles for winter combat.

c. To train vehicle commanders and drivers to improve their knowledge of vehicles, and their skill in operation of combat vehicles.

2. Instruction on methods

a. For the purpose of training specialists in the crew in team work and proficiency in maintaining and operating the vehicle, basic subjects will be assigned to the crew in the technical training plans.

The knowledge and skill of the commanders and drivers of the vehicles will be improved by training as part of the crew as well as commander or dirver of vehicle at artillery battery level. These lessons will be conducted mainly by the officers in charge of the technical section.

b. Studies must begin with the demonstration in operation of well maintained equipment (or apparatus) and proper procedures in vehicle maintenance. Then the students must be trained individually in the proper routine of inspecting the condition of the vehicles trouble shooting and repairs.

c. Practice in maintenance will be carried out on the vehicle at field depot. Effort must be made to see that all students participate in the activities simultaneously. Vehicle maintenance activities will be carried out according to the work schedule.

The skill in self-propelled gun maintenance will be acquired by working on vehicles which require certain type of maintenance. In the training, the first consideration is the period of operation or the season. For such purpose, the lesson schedule must conform with the operations plan.

Subjects and Allocation of Time

Subject Number	Title	Hours			Engine time allocated to trainees
		Training crew	Special training		
			Self-propelled gun commanders	Drivers	
	First Phase				
1	Basic Regulations on the Operation of Self-Propelled Gun and Crew Organization	2	2	2	-
2	Self-Propelled Gun Operation in Winter	2	-	-	-
3	Starting Cold Engine	-	-	6	5
4	Heating Equipment of Self-Propelled Gun	-	2	2	-
5	Inspection of Self-Propelled Gun	2	-	-	5

Subjects and Allocation of Time (Cont'd)

Subject Number	Title	Hours			Engine time allocated to trainees
		Training crew	Special training		
			Self-propelled gun commanders	Drivers	
6	Daily Maintenance of Self-Propelled Gun	2	-	-	10
7	Engine	-	-	20	10
	Total	8	4	30	30
	Second Phase				
8	Maintaining Self-Propelled Gun in Normal Combat Readiness in Winter	6	-	-	20
9	First Technical Inspection of Self-Propelled Gun	10	-	-	10
10	Materials Used	-	-	6	-
11	ZIP* of Self-Propelled Gun and Its Packing	2	-	-	-
12	Foreign Tanks and Self-Propelled Guns	2	-	-	-
13	Electrical Equipment of Self-Propelled Gun	-	-	14	-
14	Troubles in Electrical Equipment	-	-	4	5
15	Power Transmission System of Self-Propelled Gun and Troubles	-	-	12	5
16	The Drive System of Self-Propelled Gun and Its Troubles	-	-	8	-
17	Engine maintenance	-	-	6	5
18	Maintenance of Electrical Equipment	-	-	4	5
19	Self-Propelled Gun Operation in Summer	8	-	-	10
20	Care of Self-Propelled Gun	12	-	-	10
	Total	40	-	54	70
	Grand total	48	4	84	100

First Phase

Subject 1. Basic Regulations on the Operation of Self-Propelled Gun and Crew Organization

Lesson 1. (Only for gun commanders and drivers of vehicles.); general regulations on the self-propelled gun operation; procedures for taking over and preparing self-propelled guns, and procedures for placing self-propelled guns into formation; procedures for maintenance and care of self-propelled guns; records of self-propelled gun and armament; procedure for logging; the annual operational standard, intermediate repair and the operational period between overhauls of the self-propelled gun and its basic components.

Lesson 2. Permanent outdoor parking lot and their significance; disposition, care and maintenance of self-propelled guns in the parking lot; procedures for entering and leaving the parking lot and procedures for establishing the personnel's service; fire-proof establishment in the parking lot; regulations on the internal order of the parking lot.

Subject 2. Self-Propelled Gun Operation in Winter

Operationing difficulties in frigid weather; rules on preparation and maintenance of self-propelled gun for operation in winter, materials used in winter and substitutes; regulations on operation of engine, electrical equipment, power transmission equipment and the controls in winter; method of starting cold engine in frigid weather; heating equipment and method of heating in the parking area and during long stops in the field.

Subject 3. Starting Cold Engine

Heating engine with boiling water and oil; starting engine and warm up after starting; regulating the temperature of running engine.

Subject 4. Heating Equipment of Self-Propelled Gun

Individual heating equipment, its structure and regulations on utilization; preparation of heater for operation and the differences between heaters; heating equipment; fire precautions during use of individual heating equipment; supervision on the operation of heater.

Subject 5. Inspection of Self-Propelled Gun

Lesson 1. Purpose of inspection; details of operations and procedures for the inspection.

Lesson 2. Inspection of self-propelled gun by the crew before departure and during stop.

Subject 6. Daily Maintenance of Self-Propelled Gun

Lesson 1. Purpose of daily maintenance; procedure and details of operations; crew's duty; mechanic's tools and accessories utilized during daily maintenance of self-propelled gun.

Lesson 2. (Exercise); daily maintenance routine for self-propelled gun.

Subject 7. Engine

Lesson 1. General structure of engine; locations and mounting of engine and accessories, general structure and function of the fuel system, lubricating system and cooling system; order of disassembly, assembly and adjusting the engine and accessories for repair.

First class drivers will be given further training in general structure of B-2 model engine.

Lesson 2. Structure and operation of engine; technical specification and general structure of self-propelled gun engine; structure of crank assembly and distributor system; operation and adjustment of plates; principles of engine operation; firing order; engine efficiency.

First class drivers will be taught the following: general idea of mechanical efficiency; general relationship between revolution and torque; and mechanical efficiency and principles of four stroke cycle diesel engine, and superiority of the diesel engine over carburetion engine.

Lesson 3. Purpose structure and function of fuel system; component of mixed oil, the influence of the quality of mixed oil on efficiency and economy of engine; the necessity of filtering fuel and of cleaning intake air; fuel consumption under various load conditions; the most economical operation of engine; fuel system trouble shooting.

First class drivers will be given additional training on the structure of the fuel system of diesel engine.

Lesson 4. Structure and function of the lubricating system; lubricating system trouble shooting prevent and eliminate them.

Lesson 5. Structure and function of the cooling system; regulating the temperature of the coolant; methods of preventing the cooling system from freezing, cooling system trouble shooting.

Lesson 6. Starting and operating troubles and trouble shooting.

Lesson 7. (Exercise); engine; trouble shooting in the fuel, lubricating and cooling systems.

Second Phase

Subject 8. Maintaining Self-Propelled Gun in Normal Combat Readiness in Winter

Measures for keeping vehicle heated; heating self-propelled gun with tank stove and heater during a long stop; structure of POK'USU* (KAPONIRU*) for installation aboard self-propelled guns during a long stop (one month and over).

Subject 9. First Technical Inspection of Self-Propelled Gun

Lesson 1. Purpose and schedule of the first technical inspection; procedure; crew's duty; mechanic's tools used in the first technical inspection.

Lesson 2. Procedures for practice by crews for the first technical inspection of self-propelled.

Subject 10. Materials Used

Lesson 1. Fuel, its variety and grade; visual methods of determining the grades of fuel; the fuel requirements; the simplest method of determining the grade and quality of fuel in combat; substitute for basic types of fuel; safety measure in handling fuel; standard of fuel consumption and the method of economizing fuel; antiknock qualities of various fuel; general knowledge of knock suppression; general description of ethyl fuel.

Lesson 2. Requirements of lubricating oil and grease; grade of lubricating oil and grease, and visual methods of distinguishing one grade from another; procedures for determining grade and quality of lubricating oil and grease; mixture of lubricating oil and grease and substitutes; lubricating schedules for various assembly and equipment; the standard consumption for lubricants and method of economizing lubricants; procedure for collecting used oil.

Lesson 3. Low freezing point mixtures and supplementary materials; characteristics and capabilities of antifreezer; characteristics and composition of alcohol-water-glycerin mixture and alcohol-water mixture; procedures for use of low freezing point mixtures; method of determining the grade and quality of low freezing point mixture by visual methods; rules on adding low freezing point mixture to cooling system; acid and alkali, their basic characteristics and application in vehicle repair; industrial vaseline and its application; safety measure in the handling of acid and alkali.

Subject 11. ZIP* of Self-Propelled Gun and Its Packing

Purpose of reserve materials, mechanics tools and sets of accessories (ZIP*) carried by self-propelled gun; packing and locking of ZIP*; statistics and order of consumption of ZIP*.

Subject 12. Foreign Tanks and Self-Propelled Guns

Simple tactical and technical characteristics; external appearance of foreign vehicles; characteristic structure of vehicles; the weak points of vehicles.

Subject 13. Electrical Equipment of Self-Propelled Gun

Lesson 1. Knowledge of electrical engineering; electric circuit and various factors; units of measurement of electric current; strength of electric current; relations between voltage and resistance; procedures for connecting electrical apparatus to power source; electro-magnetic radiation and electronic characteristics.

Lesson 2. Starting battery; structure of battery, regulations on use and care of battery; determining the degree of charge by electrolyte density and voltage during the charging and discharging of the battery; preventive measure against freezing of electrolyte; permissable degree of discharge; procedure for determining the polarity of terminals; determining the charge of battery; troubles of a lead battery; battery trouble shooting.

First class drivers will be taught the chemical process involved in the charging and discharging of a storage battery.

Lesson 3. Ignition system; purpose of ignition system; wiring diagram of the ignition system of a lead battery system; induction coil; structure of the spark plug; structure and function of the distribution; installation of the ignition system.

Lesson 4. Exercise in installing the ignition system.

Lesson 5. Generator and regulator; structure and function of generator; structure and function of a regulator; generator troubles; and eliminate generator trouble shooting.

First class drivers will receive additional training on the structure of the regulator, the function of a generator, and the various revolving parts of an engine.

Lesson 6. Electrical apparatus and accessories; structure and principles of the starter; structure and function of the solenoid system and of the starter system; structure of starter solenoid and auxiliary relay; wiring diagram of the starter system and of the other electrical systems; function of a starter and circuit; regulations on use of a starter; structure and function of the electric signals, illuminating apparatus and flare signal equipment; structure and purpose of the auxiliary apparatus.

Lesson 7. General structure of electrical equipment; location and mounting of assembly and electrical apparatus; of the wiring diagram and layout of components; circuits of standard equipment.

Subject 14. Troubles in Electrical Equipment

Lesson 1. Troubles of storage battery, generator, electrical apparatus and accessories; signs of troubles, procedures for locating and eliminating the troubles.

Lesson 2. (Exercise); location and elimination of troubles in the electrical system.

Subject 15. Power Transmission System of Self-Propelled Gun and Troubles

Lesson 1. General structure of the power transmission system; methods of securing the assembly and equipment of the power transmission system to the chassis of the vehicle.

Lesson 2. Structure, function and adjustment of the main clutch and of the electrical system for controlling the clutch; regulations on use of clutch; troubles of the main clutch, signs of trouble and procedures for eliminating the troubles; care of clutch.

Lesson 3. Structure and function of the transmission; structure, function and control of the transmission system; transmission troubles, their detection and methods of elimination; care of transmission.

Lesson 4. Structure and function of the side clutch and brake; structure, function and adjustment of the electrical system for controlling the side clutch (steering gear) and of the brakes; side clutch and brake troubles, and procedures for detecting and eliminating them; care of side clutch and brakes.

Lesson 5. Structure and function of the electrical control system for side clutches; troubles, and their detection and elimination; care of the electrical control system for side clutches.

Subject 16. The Drive System of Self-Propelled Gun and Its Troubles

Lesson 1. General structure of drive section; structure of the drive sprockets compensating wheel and suspension equipment; structure of shock absorber; structure of the track wheel and track support roller; order of compressing track; order of dismantling various parts of the drive assembly and their replacement during operations and repair of vehicles.

Lesson 2. Troubles of the drive section; causes of troubles; procedures for detection and elimination of troubles.

Lesson 3. (Exercise); locating troubles in the drive section and procedures for eliminating them; procedures for inspection of the drive section; determination of causes of troubles, elimination of the troubles requiring replacement of shock absorber parts.

Subject 17. Engine Maintenance

Lesson 1. Purpose of engine maintenance; break-in of new engine or an engine just overhauled; engine and its components; order of cleaning the assembly and equipment and the order of inspection; order of inspection and tuning the engine; regulations on washing of filter and air cleaner; order of changing oil; tools used in engine and accessories maintenance.

Lesson 2. (Exercise); maintenance of the engine within the scope of the second technical inspection.

Subject 18. Maintenance of Electrical Equipment

Lesson 1. Maintenance of electrical equipment and apparatus; periodic inspection of the level of electrolyte, the degree of battery charge and cleaning of battery; period for charging a lead battery; inspection of power source and electrical apparatus; order of installing a starter in a vehicle; order of lubricating a vehicle; tools used in working on electrical equipment.

Lesson 2. (Exercise); maintenance of electrical equipment within the scope of the second technical inspection.

Subject 19. Self-Propelled Gun Operation in Summer

Lesson 1. The problems of operating vehicles under high temperature and dusty condition; materials used and their substitute for operation of vehicles in summer; maintenance and preparation of vehicle for summer operations; regulations on operation of self-propelled gun in the summer; periodic cleaning of filter and air cleaner.

Lesson 2. (Exercise); preparation of an self-propelled gun for summer operation.

Subject 20. Storage of Self-Propelled Gun

Lesson 1. General rules on storage procedure; general knowledge of deterioration and measures for preventing deterioration; preparing a vehicle for storage; storage of vehicle and accessories separated from the vehicles; maintenance and technical supervision of vehicles in storage; removing vehicle from storage; documents on the vehicles kept in storage and their preparation; long storage of vehicles; additional work involved in preparing for long storage of vehicles, during long storage and in removal of vehicles from long storage.

Lesson 2. (Exercise); maintenance beyond the scope of the second technical inspection for storage of self-propelled guns.

Lesson 3. (Exercise); monthly inspection of the vehicles in storage.

B. Driving

1. Purpose of study: To improve the skill of vehicle commanders and drivers in operation of combat vehicles under difficult conditions.

2. Instruction on methods

a. In the study of driving and in the actual exercise, theoretical knowledge must be tied in with practical exercise so that students will be able to explain the causes of troubles and remedy the troubles.

b. Each lesson must begin with the study of regulations on driving. Training will then be conducted with mock up, and thence on auxiliary vehicle. The training must be advanced to driving of combat vehicle only after the above-mentioned trainings are completed.

c. The actual driving of vehicles will be supervised by officers. In self-propelled gun companies, the actual driving of vehicles in the first shift will be studied by platoon leaders and deputy company commanders. While the officers are conducting practice driving, other students will study driving training item under the guidance of instructor-drivers.

d. During the preparation for group exercise, the instructors must study the schedules closely, organize of the place of study, and ensure the availability of technical equipment.

During group exercise, platoon leaders and deputy company commanders must act as leaders.

e. Drivers' practical driving skill must be improved during all the lessons and practices in which equipment are used.

Subjects and Allocation of Time

Subject Number	Title	Hour		Engine time allocated to trainees
		For self-propelled gun CO	For drivers	
	First Phase			
1	Operating Combat Vehicle -- the Basic Maneuver of Armored and Mechanized Units	--	2	--
2	Fundamentals of Operating the Self-Propelled Gun	--	2	--/15
3	Operation of Vehicle in Winter	4	6	30/55
	Total	4	10	30/70

Subjects and Allocation of Time (Cont'd)

Subject Number	Title	Hour		Engine time allocated to trainees
		For self-propelled gun CO	For drivers	
	Second Phase			
4	Techniques of Operating Vehicle on Road and in Column at Permissible Maximum Speed	2	8	20/60
5	Overcoming Anti-Tank Barriers and Obstacles in Defiles	4	12	40/100
6	Operation of Vehicle and Firing at Halt	--	6	--/60
7	Operation of Vehicle during March	--	6	--/60
8	Operation of Vehicle in Support of Infantry Charge	--	8	--/60
9	Operation of Vehicle to Overcome River Obstacles	2	10	20/80
	Total	8	50	80/420
	Grand total	12	60	110/490

Note: Self-propelled gun engine time logged by commanding officers are indicated by the numerators, and the time logged by drivers are indicated by the denominators.

First Phase

Subject 1. Operation of Combat Vehicle -- Basic Maneuver of Armored and Mechanized Units

The role and place of vehicle operation training in the over-all combat training of the armored troops; high standard of skill in the vehicle operation is the best means of ensuring high mobility and fire power of combat vehicles, of prolonging the period between maintenance and reducing deterioration of vehicles.

Conditions for ensuring effective vehicle operator training.

Subject 2. Fundamentals of Operating the Self-Propelled Gun

Techniques of operating a self-propelled gun; drawing power and resistance power and torque of an engine; power transmission to the final drive sprocket; the maximum speed of vehicle and deceleration; turning the vehicle around; passing ability of a vehicle.

Subject 3. Operation of Vehicle in Winter

Lesson 1. Driving under the winter condition and study of regulations.

Lesson 2. (Combined study); driving self-propelled gun.

Second Phase

Subject 4. Techniques of Operating Vehicle on the Road and in Column at Permissable Maximum Speed

Lesson 1. Study of regulations on operating a vehicle at maximum speed on road and in column.

Lesson 2. (Group study); driving of self-propelled gun.

Subject 5. Overcoming Antitank Barriers and Obstacles in Defiles

Lesson 1. Study of regulations on overcoming antitank barriers and obstacles in defiles.

Lesson 2. (Group lesson); operation of self-propelled gun.

Subject 6. Operation of Vehicle and Firing at Halt

Lesson 1. Study of vehicle operating techniques and firing at halt.

Lesson 2. Operating and firing self-propelled gun at halt.

Subject 7. Operation of Vehicle During March

Lesson 1. Study of regulations on operation of vehicle during a march in daytime.

Lesson 2. Operation of self-propelled gun during march in the daytime.

Lesson 3. Study of regulations on operation of vehicle during march at night.

Lesson 4. Operation of self-propelled gun during march at night.

Subject 8. Operation of Vehicle in Support of Infantry Charge

Lesson 1. Study of regulations on operation of vehicles by KUBUNDAE personnel in support of infantry charge against hostile defenses.

Lesson 2. Operation of self-propelled gun by KUBUNDAE personnel in penetrating the hostile defenses.

Lesson 3. Study of regulations on operation of vehicles by KUBUNDAE personnel in sudden relentless charge against the enemy already in defense.

Lesson 4. Operation of self-propelled gun in a sudden relentless charge against the enemy already in defense.

Subject 9. Operation of Vehicle to Overcome River Obstacles

Lesson 1. Overcoming river obstacles at night and the study of regulations portaining to it and the overcoming of deep shoal.

Lesson 2. Operation of self-propelled gun.

III. Engineer KUBUNDAE

A. Purpose of study

One year soldiers

Sodiers must be trained in the following:

1) Procedures for reconnoiter roads, bridges, river-crossing sites and enemy barriers.

2) Procedures for establishing fortifications, column roads and routes over frozen river.

3) Techniques of repairing and strengthening bridges and roads.

4) Regulations on handling of explosives and demolition by firing.

5) Establishment and neutralization of mine field on the site.

Veteran soldiers, will master the skill already acquired from practical training.

Procedures for conducting engineer leader's duty in supervision of various engineer operations carried out by infantry KUBUNDAE will be taught.

B. Instructions on methods

All lessons concerning special training must be conducted either at the engineer training ground or at the site chosen for terrain and out of consideration of the subject to be studied. Each lesson must begin with showing typical set-up accompanied by brief and clear explanation of the mission, structure and basic regulations.

During the lessons, special effort must be made to train soldiers the technique of engineer operations. The elementary skill already acquired will be further developed through all lessons concerned with special and combined tactical trainings.

Practical training in maintaining, repairing and restoring roads and bridges must be carried out by using existing installations. At the same time, bridges and roads most suitable from the training point of view must be selected.

Lessons concerning demolition must be carried out by units smaller than platoon under the supervision of officers, and safety measures must be complied with. During lessons, accurate record of amount of explosives and demolition accessories used must be kept. Within the study year of each soldier must set off two combat charges.

Study of mine laying equipment and the exercise in mine laying and neutralizing mines will be carried out by using dummies mines fitted with practise fuzes. The use of live mine in training is prohibited.

Training in carpentry must be conducted only in the fully equipped carpenter shops. During the course of training, care must be taken to see

that carpenter tools are always sharp and properly adjusted. During the training, students must acquire the ability to read simple drawing and make parts shown in the drawing without receiving any assistance. Veteran soldiers will be trained to make parts only from looking at a drawing.

During all the lessons, veteran soldiers must be trained in supervising the operations. They must demonstrate the methods of operation and the correct procedures to the one-year soldiers. When the operation is performed by two or three soldiers, the veteran soldiers must be appointed team leaders. For instance, veteran soldiers will be appointed team leaders to set up non-explosive barriers, and fortified installations and to assemble rafts with available equipment.

Subjects and Allocation of Time

Subject Number	Title	Hours		
		1st Phase		2nd Phase
		One-year soldiers	Veteran soldiers	All soldiers
	Field Fortification			
1	Engineer Tools, Material and Manufactured Goods, Used in Engineer Operations	10	12	--
2	Camouflage and Intrenchment	6	--	--
3	Laying Operation	8	--	--
4	Structure and Establishment of Trench, Intrenchment and Communication Trench	8	--	--
5	Noncombat Facilities	--	8	--
6	Setting Up and Overcoming Non-explosive Barriers	6	--	20
7	Prefabricated Fortifications	--	16	--
	Total	38	36	20
	Military Road			
8	General Concept of Military Roads	3	--	--
9	Engineer Reconnaissance on, Repair and Maintenance of Road	--	--	16
10	Cross-Country Route of March	--	--	8
	Total	3	--	24

Subjects and Allocation of Time (Cont'd)

Subject Number	Title	Hours		
		1st Phase		2nd Phase
		One-year soldiers	Veteran soldiers	All soldiers
	Military Bridges and River-Crossing Site			
11	General Study of Military Bridge	4	--	--
12	Crossing Points of Frozen River	--	--	12
13	Reconnaissance, Repairing and Strengthening of Wooden Bridges	--	--	8
	Total	4	--	20
	Techniques of Bomb Disposal			
14	Explosives and Fuzes	--	--	6
15	Setting Off Charges by Combustible and Mechanical Fuzes	--	--	10
16	Setting Off Charges by Electricity	--	--	10
17	Use of Explosives in Earthwork	--	--	21
18	Blasting Ice and Ice Cluster	--	12	--
19	Demolition of Road and Road Installation	--	8	--
	Total	--	20	47
	Laying and Neutralization of Mines			
20	Land Mines: Laying, Removal and Destruction	--	--	12
21	Establishment of Mine Field	--	12	18
22	Reconnaissance and Neutralization of Mines in the Field	--	12	20
23	Delayed Action Mine	--	16	--
24	Methods of Laying Mines on March Route and Methods of Neutralizing Mines	--	12	--
	Total	--	52	50

Subjects and Allocation of Time (Cont'd)

Subject Number	Title	Hours		
		1st Phase		2nd Phase
		One-year soldiers	Veteran soldiers	All soldiers
	Field Water Supply			
25	Troop Water Supply in Winter	--	--	8
	Total	--	--	8
	Carpentry			
26	Timber Work	--	--	12
27	Manufacture of Stake, Frame Support and Wooden Horse	--	--	8
	Total	--	--	20
	Engineer-Tactical Training			
28	Duties at the Engineer Observation Post	--	--	4
29	Methods of Laying Mines in the Forward Edge of Defense	--	--	12
30	Actions to Be Taken by Engineer Teams (Squads) during the Reconnaissance in the Forward Edge of Enemy Defense	--	--	8
	Participation in the Lesson on Subject 20 of the Infantry KUBUNDAE and in the General Arms and Services Tactical Training in Subjects 21 and 22	--	--	34
	Total	--	--	58
	Grand total	45	108	247

Subject 1. Engineer Tools, Materials, and Manufactured Goods Used in Engineer Operations

One Year Soldiers

Lesson 1. Purpose and basic specification of portable engineer tools; results of the operations; maintenance and storage of engineer tools; polishing engineer tools; procedure for use of engineer tools.

Lesson 2. Timber work; engineer tools and their purpose; procedure for use of engineer tools, maintenance and polishing engineer tools.

Lesson 3. Carpenter's material and metal goods used in engineer operation; materials used in intrenching and their characteristics.

Lesson 4. Manufacture of cushions, and uses of twigs, towers, branches of trees and fences.

Veteran soldiers

Lesson 5. Purpose, tactical and technical capabilities, and basic components of powered saws, and structure of basic component.

Lesson 6. Preparing saws for operations; preparing fuel mixture and filling; starting the engine; connecting saw equipment; troubles of saws, their detection and elimination; protection and transportation of saws.

Lesson 7. Duties of the guards; preparing saws for operations; practice operations of saws; care of saws during operation; eliminating troubles of saws.

Subject 2. Camouflaging and Intrenchment

Lesson 1. Faulty techniques in camouflage; techniques of camouflaging men and combat technical equipment with available materials; prescribed camouflage material; purpose, utilization and protection of camouflage material.

Lesson 2. Selecting the location of one-man slit trench; intrenching; methods of camouflaging and developing slit trench into a kneeling fire trench and standing fire trench; intrenching in snow, marsh land and rocky soil.

Subject 3. Laying Operation

Lesson 1. Methods of setting up aiming stakes in a straight line and methods of measuring distances; acute angle laying and obtuse angle laying, marking circle, parallel and perpendicular line on the spot; methods of marking lines on the spot.

Lesson 2. Methods of determining the clearance of one point against another; methods of measuring with a level the corner stones for terrain and installations; methods of adjusting the perpendicular for walls and pillars; layout of slope.

Subject 4. Structure and Establishment of Trench, Intrenchment and Communication Trench

Lesson 1. Firing trenches, machine-gun trenches, grenade launcher trenches, mortar trenches, artillery trenches, trenches for self-propelled guns and tanks, their basic requirements and dimension; layout of trenches, intrenchments and communication trenches and the order of the operations for planning, laying out and intrenching camouflage during operation.

Lesson 2. Setting up trenches and intrenchments for combat, administration and sanitation; camouflaging trenches and intrenchments.

Subject 5. Noncombat Facilities

Lesson 1. Structure of a cave; dimension and order of establishment; materials and time required for the establishment of a cave and its facilities.

Lesson 2. Establishment of field mess; structure of field bath.

Subject 6. Setting Up and Overcoming Nonexplosive Barriers

Note: Lessons 1, 2 and 3 will be studied in the first step with the one year soldiers. Veteran soldiers will be further trained in the method of supervising operations in Lessons 4, 5, 6, 7 and 10.

Lesson 1. Various wire barriers, materials and engineer tools used in installation; results of setting up wire barriers; electric wire barriers; methods for installing illuminating signal equipment and acoustic signal equipment on the barriers.

Lesson 2. Setting up low and barely noticeable wire entanglements in the field.

Lesson 3. Overcoming wire barriers.

Lesson 4. Variety of portable wire barriers; structure of knife-rest wire entanglements and hedgehog wire entanglements; low wire entanglements, method of binding them together and method of setting them up in two or three rows; setting up entanglements consisting of barely noticeable wire; camouflaging during establishment and camouflaging of barriers.

Lesson 5. Variety of antipersonnel barriers set up in shallow snow; methods of setting up and connecting barriers in the field; wire barriers set up in deep snow; camouflaging during installation and camouflaging of barriers.

Lesson 6. Methods of setting up wire fences and wire entanglements in two or three rows; camouflaging the operation and camouflage of barriers.

Lesson 7. Opening passages through wire entanglements by using sharp shears and explosives; overcoming barriers in winter.

Lesson 8. Various antitank barriers used in winter, their purpose and basic dimension.

Lesson 9. Engineer's antitank barriers and other antitank barriers, their purpose and dimension.

Lesson 10. Establishing infantry passages through the antitank barriers and establishing vehicle routes through antitank barriers permitting passage of transportation equipment, guns and self-propelled guns.

Subject 7. Prefabricated Fortifications

Lesson 1. Purpose, structure and application of portable steel cover; for security mission and structure of the concealable steel cover; setting up the frame and steel cover; camouflaging the operation and camouflaging steel cover.

Lesson 2. Purpose and structure of an knock-down installation; methods of assembling installation in the field and methods of camouflaging it; camouflaging the operation.

Subject 8. General Concept of Military Road

Lesson 1. The basic types of roads and important factors; aerial view of a road; straightaway; radius of a bend; flat ground at mid-slope of a mountain; drainage; roadblock and signpost.

Lesson 2. Road building equipment; tactical-technical capacity of a road building vehicle and demonstration.

Subject 9. Engineer Reconnaissance on Repair and Maintenance of Road

Lesson 1. Duties, organization and methods of conducting road reconnaissance; determining the grade of a road; how to determine the basic requirements of road and road facilities, and procedures to determine their conditions.

Veteran soldiers will be further trained in making entry in the reconnaissance log.

Lesson 2. Construction and maintenance of roads in winter.

Lesson 3. Maintaining roads which are in poor condition.

Lesson 4. Strengthening road beds various ways of improving sandy roads, clay roads and black earth roads; establishment of detour.

Note: Veteran soldiers will be further trained in methods of supervising repair and maintenance in Lessons 2, 3 and 4.

Subject 10. Cross-Country Route of March

Lesson 1. Reconnaissance and plotting cross-country route of march; selection and plotting cross-country route of march; determining the grade of ascending and descending slopes.

Veteran soldiers will be further trained in methods of drawing rough sketch of cross-country route of march.

Lesson 2. Opening cross-country route of march through obstacles, barriers, and various terrains; using mechanized equipment and clothing prepared beforehand; crossing an intrenchment, anti-tank ditch, etc.

Veteran soldiers will be further trained in supervising preparation of cross-country route of march.

Subject 11. General Study of Military Bridge

Lesson 1. Basic components of a bridge; types of pier, material and permissable load; various structural components of the mid-span; abutments and piers.

Lesson 2. Pile dirver, its purpose and tactical-technical capacity; demonstrating pile driving with diesel-powered pile driver; preparation of diesel-powered pile driver for the operation.

Subject 12. Crossing Points of Frozen River

Lesson 1. Reconnaissance and selection of river crossing points; examining and measuring thickness of ice.

Veteran soldiers will be further trained in determining the load-carrying capacity of ice and drawing rough sketches and report writing.

Lesson 2. Methods of strengthening the ice; establishment of river-crossing points.

Lesson 3. Strengthening ice by reinforcing the upper part of the ice; maintenance of river-crossing points and order of troop crossing; organizing assistance and control during the crossing of frozen river.

Note: Veteran soldiers will be trained techniques of supervising ice strengthening operations in Lessons 2 and 3.

Subject 13. Reconnaissance, Repairing and Strengthening of Wooden Bridge

Lesson 1. Reconnaissance of bridges; procedure for evaluating the bridge to determine the capabilities search for detour, repair of bridges and search for reinforcing materials.

Veteran soldiers will be further trained techniques to determine the load capacity of a bridge and to draw sketches of bridges.

Lesson 2. Structure of the mid-span and the repair of piers; replacement of the floating boards, stakes and beams; replacement and strengthening of unserviceable KYONGGAN*; strengthening unserviceabl joints; repair of piers and approaches.

Lesson 3. Strengthening floating boards, KYONGGAN* and piers.

Note: Veteran soldiers will be further trained in supervising repairing and strengthening of bridges in Lesson 2 and 3.

Subject 14. Explosives and Fuzes

Lesson 1. Explosive, its characteristics, and application; regulations on handling of explosives and precautionary measures in handling explosives.

Lesson 2. Detonating fuze, its purpose, characteristics and application; damaged detonating fuze; regulations on handling detonator; fuze, detonating fuze, their purpose, characteristics, application and regulations on their handling.

Lesson 3. Slow-burning fuze its purpose, characteristics, burning speed and application; engineer tools and materials for demolition operations, their purpose and application; regulations on storage and transportation of explosives, detonators and detonating fuze.

Subject 15. Setting Off Charges by Combustible and Mechanical Fuzes

Note: Veteran soldiers will be further trained in supervising operation in each lesson of the subject.

Lesson 1. Clustering concentrated charge, slow-burning powder and pyrotechnic powder, their purpose and application; clustering charges of powder without powder bag and clustering powder bags.

Lesson 2. Manufacture of powder bag; use of powder bags; tree-painting techniques, techniques of attaching demolition charges to object.

Lesson 3. Fuze lighter, its purpose and manufacture; techniques for handling fuze lighter; procedure for inserting and securing fuze in an explosive charge; procedures for igniting fuze; setting off individual charges by combustible fuze.

Lesson 4. Detonating fuze network; setting off string of charges by use of detonating fuze network precautionary measures during blasting operation.

Lesson 5. Fuze, its structure and operating principle; precautionary measures in handling and using fuze; using fuzes in setting up explosive barriers; demolition; techniques of removing fuze from an explosive charge.

Subject 16. Setting off Charges by Electricity

Note: Veteran soldiers will be further trained in supervising operation in each lesson of the subject.

Lesson 1. Electric igniters and detonators, their purpose, structure, care, maintenance, inspection, and measurement of diameter.

Lesson 2. Types of engineer TOCH'E*, their purpose and inspection; equipment and procedures for inspecting igniters, dry cell, and lead battery; tactical-technical capabilities of equipment, their purpose, basic components and order of utilization.

Lesson 3. Electric network for setting off charges and various factors; series connection, parallel connection and parallel-series connection; structure of electric network and inspection; precautionary measures to be taken in using electricity for setting off charges and measures to ensure positive result; setting off a charge.

Subject 17. Use of Explosives in Earthwork

Note: Veteran soldiers will be further trained in supervising operation in each lesson of the subject.

Lesson 1. Breaking up the ground with explosives; pulverizing the earth by setting off explosives, single or series of charges.

Lesson 2. Using explosives to build antitank traps and revetments for tanks, self-propelled guns and motor vehicles.

Lesson 3. Field fougasse, stone fougasse, their purpose and their disposition in the field.

Establishment of command post; methods of setting fougasse and methods of exploding it by fire and electricity.

Lesson 4. Breaking up a rock by setting off explosives within or outside the rock; pulverizing rocks and ore bed by setting off charges packed into drilled holes.

Subject 18. Blasting Ice and Ice Mass

Lesson 1. Reconnaissance of ice; choice of explosives; preparation and planting charges for under-ice explosion; techniques for planting charges under-ice; setting off the charge.

Lesson 2. Demolition to prevent accumulation of drift ice; demolition of ice cluster; precautions to be taken during demolition.

Subject 19. Demolition of Roads and Road Installations

Lesson 1. Destruction of national highways and highway installations.

Lesson 2. Destruction of railways and facilities stations.

Subject 20. Land Mines: Laying, Removal and Destruction

Lesson 1. Types of land mines and fuzes, their function, structure and functioning principles; precautions to be taken when handling land mines and fuzes; procedure for installing and removing fuzes from an armed land mine.

Lesson 2. Methods of laying antipersonnel and antitank land mines in different types of ground and in snow; general concept on laying antitank land mines with "reignition equipment" (TN Presumably booby trapped antitank mine.); camouflaging of land mines.

Lesson 3. Methods of removing antitank mines laid without "reignition equipment" and methods of neutralizing it; destroying antipersonnel mines; destroying antitank mines laid with "reignition equipment"; precautions to be taken when neutralizing antitank mines.

Subject 21. Establishment of Mine Field

Note: During the first step, Lessons 4 and 5 of the winter training plan (in the snow) will be studied jointly with veteran soldiers.

Lesson 1. General concept on mine field and methods of laying mines; selection of reference points; assignment of duties among engineers; methods of establishing a mine field and methods of forming squad combat order for each method of establishing a mine field.

Lesson 2. Establishment of antipersonnel mine field consisting of pressure-release type mines; camouflaging mine field.

Lesson 3. Methods of laying antitank mines with pull-type firing device; camouflaging of the mine field.

Lesson 4. Methods of establishing an antitank mine field by strips perpendicular to the defense line of friendly forces; camouflaging mine field.

Lesson 5. Methods of establishing an antitank mine field by strips parallel to the defense line of friendly forces; camouflaging mine field.

Lesson 6. Methods of establishing an antitank mine field in pattern; camouflaging mine field.

Subject 22. Reconnaissance and Neutralization of Mines in the Field

Note: During the first step in Subject 22, Lesson 5 for winter training will be studied jointly with veteran soldiers.

Lesson 1. Basic types, structures and functioning principles of modern foreign mines and fuzes; methods of neutralizing mines.

Lesson 2. Equipment for locating and neutralizing mine; mine detector, its mission and structure; maintenance and care of mine detector; use of mine detector.

Lesson 3. Mine probes and hooks, their mission, and methods of use; manufacture of the hooks and mine probes; manufacture of safety equipment and accessories, their mission and application; mine neutralizer (TURAL*), its mission and application.

Lesson 4. Reconnaissance for mines and mine field; marking the mines detected and boundary lines of mine field; determination of the type of detected mines and methods of removal; destruction of booby-trapped mines.

Lesson 5. Methods of establishing lane through mine field; width of lane; reconnaissance patrol, organization, equipment and actions in clearing a lane; methods of removing mines from lane; guard duties at the lane; duties of the signal troops; guides and patrols.

Subject 23. Delayed Action Mine

Lesson 1. Delayed action mine, its structure and mission; preparation for laying mines, laying and camouflaging of mines.

Lesson 2. Laying and camouflaging of booby traps.

Lesson 3. Reconnaissance, detection and neutralization of delayed action mines and booby traps.

Subject 24. Methods of Laying Mine on Marching Route and Methods of Neutralizing Mines

Lesson 1. Methods of laying mines on the roads and column roads; order of laying mines on the roads and column roads and site for laying mines; equipment for laying mines; methods of laying mines and fougasse.

Lesson 2. Reconnaissance and neutralization of mines on the road and column road; reconnaissance of mine field, removal of mines and fougasse detected; methods of neutralizing delayed action mine; methods of marking lane cleared for troop advance.

Lesson 3. Methods of laying mines in shoals (bridges and river-crossing points); formation of engineer combat order and duties of the escorts; laying mines and preparation for demolition of bridges and river-crossing points; methods of marking boundary lines of mine field and recording the direction from the land mark.

Lesson 4. Neutralization of mines in shoals (bridges and river-crossing points); reconnaissance of shoals (bridges and river-crossing points); preparation of mine detector for the under-water operations; methods of removing mines and other barriers from shoals (bridges and river-crossing points).

Subject 25. Troop Water Supply in Winter

Keeping the well and holes in the ice from freezing; methods of purifying water by boiling and use of chlorine; preservation and transportation of water in winter.

Veteran soldiers will be given supplementary training in supervision of operations to keep wells and holes in the ice from freezing.

Subject 26. Timber Work

Note: Veteran soldiers will be given supplementary training in making parts and in supervision of operations based on the plans in each lesson of the subject.

Lesson 1. Methods of cross-cutting a log ; removal of growth in a jungle; methods of marking lines on square timber with an inked string and methods of ripping a log into two and four pieces of square timbers; methods of ripping boards and logs.

Lesson 2. Preparation of clamps and holes for clamps; methods of boring holes vertically; methods of inspecting guages with models; manufacture of clamps.

Lesson 3. Methods of making scarf joints using wooden lock pin or securing with bolts; wooden lock pin, bolts, wooden nail, their guages and application.

Lesson 4. Methods of making scarf joints with ends cut straight or at an angle and secured with bolts and iron ring; iron ring, its structure and application.

Lesson 5. Methods of marking lines on a log with an inked string for working guides and methods of linking them with an angle indicater and straight line, and methods of grafting it in angle with clamps, KUMI* and PANGUMI*.

Lesson 6. Joining log board; methods of sawing log; methods of joining TANP'YON* board; methods of securing logs and boards with nails; methods of preparing and selecting SAEUNJOP*; manufacture lock pins and wedges; determining the type and preparation of a groove; methods of inserting the locking wedge into the groove.

Subject 27. Manufacture of Stakes, Frame Supports and Scaffolding

Note: Veteran soldiers will be given supplementary training in making parts according to plans and supervising the operation in each lesson of the subject.

Lesson 1. Methods of marking a log with an inked string, and cutting it into three and four pieces of square lumber.

Lesson 2. Support; foundation timber; preparation for supplementary timber and diagonal support, assembling of frame supports.

Lesson 3. Preparation for installation of scaffolding cross brace and horizontal support; assembling scaffolding.

Subject 28. Duties at the Engineer Observation Post

Organization and mission of the observation post; selection of sites for the observation posts, installation and camouflaging; observation equipment and employment; capacity of developing the skill of troops in observation; methods of evaluating the enemy's fortifications, barriers and engineer operations.

Subject 29. Methods of Laying Mines in the Forward Edge of Defense

Training of an engineer squad in laying mines; coordination in a squad; laying and camouflaging of mines; methods of drawing sketches of mine field and direction from land marks; report on operation.

Subject 30. Actions to be Taken by an Engineer Team (squad) during Reconnaissance in the Forward Edge of Enemy's Defense

Combat formation of a squad when approaching the forward edge of enemy's defense; determination of the type and size of the enemy's barriers; methods of taking samples of mine; overcoming barriers; determination of types of enemy pillboxes, disposition and types of trenches; reconnaissance report.

IV. Signal KUBUNDAE, and Signal Troops in Artillery and Mortar KUBUNDAE

Method of Instructions

1. Lessons for studying the structure, and regulations on use of communication equipment must be conducted through practice so that the soldier's may become proficient in operating the equipment.

Lessons for studying the structure and the function of communication equipment must be conducted by use of visual aids.

Those lessons considered most complicated from their contents will be conducted by the platoon leader.

2. When conducting lessons in receiving, sending and radio operations, study reference book called "Methods of Training Radio Operators" must be used as a guide. When conducting training in methods of receiving and sending, one-year soldiers must be divided into teams. These teams will be divided again into two to three teams in accordance with their records. Veteran soldiers who are senior radio operators must prepare for the third class (second class) radio operators' test.

Basic regulations on the radio operation must be studied in the classroom beforehand. Soldiers who have not learned these regulations must not be allowed to operate radios. During the organization of the lessons in radio operation, duty radio operators who will operate the radio at the same speed in each replacement must be appointed.

3. Lessons for training radiotelephone operators on the methods of installing terminal and relay stations must be conducted in conjunction with installation of communication lines among squad (unit) components. Veteran soldiers will be appointed unit leaders. Training in the receiving and sending of messages by wireless telegraph must be carried out at the radiotelephone stations having lines to switchboard which were installed beforehand.

4. Training of insulated telephone wire squads must begin with individual training in installing insulated wire. Defects in wiring discovered must be corrected immediately to meet the technical standard.

When the members of the squad (unit) have acquired technical proficiency, training emphasis will be placed on installation of communication lines at any time of the day. A veteran soldier will be appointed leader of the insulated telephone wire squad.

5. During lessons of the special tactical training, emphasis will be placed on coordination within the communication KUBUNDAE. Improvement in special tactical training must be made during the command staff training and during the general arms and services training. During these lessons and training, efforts must be made to train veteran soldiers to be capable of performing the duties of unit leader (chief of communication channel).

6. To prepare veteran soldiers to perform the duties of unit leader, senior radio operator and chief of communication channel of lessons must be conducted in the field by the collective training methods after

which they will gradually take over duties in the unit under the leadership of a platoon leader during the first step of the winter training period.

7. A mobile communication equipment squad must be reinforced with motorcyclist who is proficient in maintenance and operation of a motorcycle. The technical training of motorcyclist must be limited to less than 200 hours in accordance with the article 9 of the organization and methods of instructions prescribed in Part I. Members of this squad will be given special training based on the Subjects and Allocation of Time for radio operators.

During the lessons in special tactical training, the command staff training, and the general arms and services training, soldiers in the mobile communication equipment squad will undergo immediate training to perform their duties.

A. Training of radiotelephone operators

First Phase

Objectives of study:

For one-year soldiers: General principles of telephone and radio communication will be given and familiarization course on designated equipment will be given.

For veteran soldiers: Training in performing the duties of unit leader, chief of communication channels and radiotelephone operator will be given.

Subjects and Allocation of Time

Subject Number	Title	Hours	
		For all telephone operators not in arty and mortar KUBUNDAE	For telephone operators in arty and mortar KUBUNDAE
	One-Year Soldiers		
1	Principles of Sending Messages through Telephone	3	3
2	General Structure of Field Telephone Set	6	6
3	General Structure of a Small Switchboard	2	2
4	General Knowledge on Principles of Radio Communication	3	3
5	General Knowledge on Short-Wave Radio	5	5
6	General Knowledge on Ultrashort-Wave Radio	4	4

Subjects and Allocation of Time (Cont'd):

Subject Number	Title	Hours	
		For all telephone operators not in arty and mortar KUBUNDAE	For telephone operators in arty and mortar KUBUNDAE
7	Duties of Telephone Station Personnel and Regulations on Conducting Telephone Conversation	4	4
8	Methods of Installing Insulated Outdoor Telephone Wire	6	6
	Total	33	33
	Veteran Soldiers		
	Power Source		
9	Dry Cell, Wet Cell and Plate Batteries	4	4
10	Alkaline Battery	4	4
11	Charging Alkaline Battery	6	6
12	Vibrating Transformer and Its Function	2	2
	Total	16	16
	Telephone Station Duties		
13	Duties of Central Telephone Station Chief	12	-
14	Duties of Terminal Telephone Station Chief and Intermediate Telephone Station Chief	6	16
	Total	18	16
	Wiring		
15	Practice in Installation of Insulated Double Line Telephone Wires during the Day and at Night	16	16
16	Duties of Chief of Communication Channels	16	16
	Total	32	32
	Study of Radio		
17	Practice in Radiotelephone Operation at Optimum Distance	27	29
	Total	27	29

Subject 1. Principles of Sending Messages through Telephone

Lesson 1. A brief outline of the development of telephone communication; the roles of the Russian scientists in the development of telephone; roles of the telephone communication and its place in the troop command.

Lesson 2. Principles of Sending oral messages to distant places through the telephone wire electucally; methods of altering air vibrations into electrical oscillation, and electrical vibrations into air vibration; simplest diagram of the principles of sending messages through telephone.

Subject 2. General Structure of Field Telephone Set

Lesson 1. Tactical-technical capabilities of a telephone set; components of a telephone set, their mission and their disposition.

Lesson 2. Preparation of a telephone set for operation; the routine inspection of a telephone set, reinforcement of insulated wire ends before making connection; methods of connecting a telephone set to the single-line telephone lines and to the double-line telephone lines.

Lesson 3. Regulations on use of telephone set, sending call-signal; sending oral messages; sending call signal; care and maintenance of telephone set for storage and operation; maintaining operation of a telephone set in winter.

Subject 3. General Structure of Small Switchboard

Function of a switchboard; principles of switchboard operation; tactical-technical capabilities and general structure of a switchboard; demonstration of the function on the switchboard.

Subject 4. General Knowledge on Principles of Radio Communication

Russian scholar, I. S. POPOV is the inventor of radio communication; general principles of radio communication; general concept on electronic wave and its classification; basic parts of a telephone set (transmitter, receiver and antenna) and its function.

Subject 5. General Knowledge on Short-Wave Radio

Lesson 1. Classification of radios equipment in ground forces PUDAE and YONHAP PUDAE, employment of radios in PUDAE; demonstration of radio operation.

Lesson 2. Basic parts of a radio set; their functions and their disposition in a radio set; knowledge on the tactical-technical capabilities of a radio set; order of tuning radio for telephone operation.

Subject 6. General Knowledge on Ultrashort-Wave Radio

Lesson 1. General concept of the characteristics of ultrashort wave; function of a radio set; basic components of a radio set, their function and disposition.

Lesson 2. Tactical-technical capabilities of a radio set; variety of radio antenna and its function; tuning of a radio set.

Subject 7. Duties of Telephone Station Personnel and Regulations on Conducting Telephone Conversation

Lesson 1. Missions of the central telephone station, terminal and intermediate telephone station; general knowledge on duties of the telephone station personnel; records and their function at terminal telephone station.

Lesson 2. Duties of a duty telephone operator at the terminal telephone station; regulations on telephone conversation.

Subject 8. Methods of Installing Insulated Outdoor Telephone Wire

Lesson 1. General function of single line and double line insulated outdoor telephone wire; basic requirements in installation of insulated wire; general knowledge on materials and engineer tools; equipment for laying and taking in insulated wire; disposition of the telephone wire equipment and packing for transportation.

Lesson 2. Preparation of terminal ends of insulated single line and double line outdoor telephone wires.

Lesson 3. Regulations on laying insulated wire from a spool; installation of insulated wire and methods of splicing under various conditions.

Subject 9. Dry Cell, Wet Cell and Plate Batteries

Lesson 1. Structure, operating process and electrical data of the dry and wet cells; inspection on the serviceability of a cell.

Various methods of connecting cells in a lead battery.

Lesson 2. Types of the plate dry cells, their structure and electrical data; inspection on the serviceability of the plate battery; regulations on storage of cells and lead battery; use (connection and joining) of plate battery in a radio set.

Subject 10. Alkaline Battery

Lesson 1. Structure of alkaline battery.

General concept on chemical processes which take place during charging and discharging of a battery.

Lesson 2. Types of the alkaline batteries which are used in the regiment and their electrical data; regulations on the use and storage of batteries.

Subject 11. Charging Alkaline Battery

Lesson 1. Summer and winter electrolyte of alkaline battery; manufacture of the electrolyte, and measuring specific gravity.

Lesson 2. The battery charging system and amperage and valtage requirements; preparation of battery for charging.

Lesson 3. Regulations on connecting batteries for charging based on electrical data; various methods of connecting batteries for mass charging; safety regulations for charging batteries.

Subject 12. Vibrating Transformer and Its Function

Function of the vibrating transformer and the principles of operation; general structure of the radio vibrator and regulations on its use.

Subject 13. Duties of Central Telephone Station Chief

Lesson 1. Selection of site for central telephone station; supervision of deployment and installation of the central telephone station and deployment of internal communication system at the command post (observation post); practice in switchboard operation.

Lesson 2. Maintaining records at the telephone station.

Performing the duties of central telephone station chief while managing the central telephone station; supervising evacuation of telephone lines and central telephone station.

Subject 14. Duties of Terminal Telephone Station Chief and Intermediate Telephone Station Chief

Lesson 1. Supervision of installation of terminal telephone stations and intermediate telephone stations in the trenches, covered trenches and other concealed trenches; supervision of telephone station personnel during the management of the telephone station.

Lesson 2. Selection of sites for deployment of terminal and intermediate telephone stations in the open areas and in the forest; supervision of deployment of a telephone station; maintaining record at the telephone station; supervision of duty telephone operators and wire inspectors; commanding of the telephone station personnel in defense of telephone station.

Subject 15. Practice in Installation of Insulated Double Line Telephone Wire during the Day and at Night

Installation and evacuation of the insulated telephone wire in the field; selection of channels; methods of installing telephone wire through valleys, narrow paths, KUKTO* railways and wooded area; splicing and installation of insulated wire; installation of terminal telephone station and intermediate telephone station; maintaining the telephone wire and elimination of troubles; unit commander's duties during evacuation of telephone wire.

Subject 16. Duties of Chief of Communication Channels

Lesson 1. Personnel and equipment under the control of chief of communication channels; duties of chief of communication channels in preparation of communication equipment for operation; assuming the duties of communication chief; familiarization with duties; assignment of duties to subordinates; supervision of operations for establishing communication; methods of reporting to the communication chief.

Lesson 2. Establishing procedures for reporting plan by the chief of communication channels in submitting reports.

Lesson 3. Duties of chief of communication channels operation during combat; maintaining communication channels; use of alternate communications channel and other communication equipment; supervision of operation during transfer of command post (observation post).

Lesson 4. Organization the guards and defense of telephone wires and station; duties of chief of communication channels when telephone station is attacked.

Subject 17. Practice in Radio Telephone Operation at Optimum Distance

Practice in selection of sites for deploying telephone stations, deployment, tuning, communication control and transmission of messages; operations within the radio net and channel; methods of establishing communication through intermediate radio station; use of improvised antenna.

Second Phase

1. Objectives of study

a. To train soldiers to perform the guard duties for the insulated telephone wire squad (unit) and to lay insulated telephone wire at the predetermine speed.

b. To familiarize soldiers with the structure and care of assigned equipment.

Subjects and Allocation of Time

Subject Number	Title	Time	
		Telephone men not in arty or mortar KUBUNDAE	Telephone men in arty and mortar KUBUNDAE
	All Soldiers		
	Telephone		
18	Structure and Function of the Telephone Components	16	16
19	Diagram of the Principles of the Telephone Circuity and Flow of Electric Current in the Circuit	6	6
	Total	22	22
	Radio Engineering		
20	General Structure of a Short-Wave Radio Set and Regulations on Its Use	10	10
21	General Structure of an Ultrashort-Wave Radio Set and Regulations on Its Use	10	10
	Total	20	20
	Electrical Engineering		
22	The Soviet Union is a Country Where Great Inventions Were Made in the Field of Electricity	2	2

Subjects and Allocation of Time (Cont'd)

Subject Number	Title	Time	
		Telephone men not in arty or mortar KUBUNDAE	Telephone men in arty and mortar KUBUNDAE
23	Basic Phenomenon and Laws of the Direct Current	8	8
24	Capacitance and Condensers	2	2
25	Wet and Dry Cells	4	4
26	Magnet and Electromagnet	4	4
27	General Concept of Alternating Current	4	4
	Total	24	24
	Telephone Station Duty		
28	Establishment of Terminal and Intermediate Telephone Stations and Duties at the Stations	10	10
29	Receiving and Sending Messages by "Dictation" Telephone	8	8
30	Establishment of Central Telephone Station at the Command Post	18	-
	Total	36	18
	Wiring		
31	Methods of Installing Insulated Outdoor Telephone Wire	14	16
32	Practices in Installing Insulated Telephone Wires and Establishment of Terminal and Intermediate Telephone Stations in Various Areas	79/83	83
	Total	93/97	99
	Special Tactical Training		
33	Operations to Ensure Communications by Communication KUBUNDAE during March and in an Offense against the Enemy Prepared for Defense	8/8	-
	Participation in Command Staff Training	16/-	-
	Participation in General Arms and Services Tactical Training on Subjects 21 and 22 and Participation in Study of Subject 20 for Infantry KUBUNDAE	22/34	-
	Total	46/42	-
	Grand Total	241/241	183

Note: 1. The numerator and denominator denote time for communication company and platoon respectively.

2. Telephone men in the artillery and mortar KUBUNDAE will study the special tactical training subjects in joint tactical study and in maneuver of their own KUBUNDAE.

Subject 18. Structure and Function of Telephone Components

Lesson 1. Structure of handset; structure of transmission wire and adapter; diagram showing connections of the transmitter, receiver and transmission switch.

Lesson 2. Structure of the mouthpiece of telephone transmitter; general concept on the function of a telephone receiver which transforms the oscillation of electric current into the sound.

Veteran soldiers will be given supplementary training in inspection and trouble shooting of handset.

Lesson 3. General concept on the function of telephone transmitter which changes the sound into oscillation of electric current; structure of telephone mouth-piece.

Veteran soldiers will be given supplementary training in inspection and trouble shooting the handset.

Lesson 4. Structure of a transformer; the electrical data of its coil and the operating principles.

Veteran soldiers must be given supplementary training in study of diagrams of coil tip and parts of transformer removed.

Lesson 5. Components of an inductor and its function structure of the distributor circuit of an inductor; functions of the main shaft and distributor circuit.

Veteran soldiers will be given supplementary training in inspection of the inductor.

Lesson 6. General concept on the structure of the solarization bell (TN Fol lit.) of the alternating current, its components purpose and the function of the bell of the alternating current.

Lesson 7. Structure and function of telephone accessories.

Subject 19. Diagram of the Principles of Telephone Circuitry and Flow of Electric Current in the Circuit

Study of the diagram of the principles of a telephone circuitry; the flow of electric current in the circuit of a telephone set and the function of the components.

Veteran soldiers will be given supplementary training in the study of diagram of the telephone set and the flow of electric current in the circuit.

Subject 20. General Structure of a Short-Wave Radio Set and Regulations on Its Use

Lesson 1. Basic components of a radio set; its general structure and function; types, purpose and structure of antenna; deployment of various antennas.

Lesson 2. Power source of a radio set and its function; installing and connecting lead batteries; connecting power source to the transceiver.

Veteran soldiers will be given supplementary training in determining the serviceability of the power source of a radio set.

Lesson 3. Nomenclature and mission of the control knobs and switches on the front panels of a transmitter and receiver; order of the tuning and operation of the transmitter and receiver to the designated wave length; methods of changing from transmitting to receiving of messages and vice versa; regulations on the exchanging of telephone messages.

Veteran soldiers will be given supplementary in: Methods of changing the function of the blocks of the transmitter and receiver during the tuning of a radio set.

Lesson 4. Selection of site for deploying radio sets; deployment of radio sets and preparation for operation; methods of tuning the receiver and transmitter to various wave lengths; radio telephone operation.

Veteran soldiers will be given supplementary training in supervision of operation during the deployment of radio sets.

Subject 21. General Structure of an Ultrashort-Wave Radio Set and Regulations on Its Use

Lesson 1. Basic parts of a radio set, its function and general structure; power source of a radio set and installation.

Veteran soldiers will be given supplementary training in determining the serviceability of the radio power source.

Lesson 2. Nomenclature and function of the front panel of radio set, controls knobs and switches; order of tuning the hand set; communication control; methods of connecting a radio set to the telephone wire.

Veteran soldiers will be given supplementary training in General concept on the processes involved in tuning of antenna.

Lesson 3. Preparation for operation of a radio set; tuning of a radio set; sending and receiving radio signals and short radio telegrams.

Lesson 4. Selection of site for deplaying radio sets deployment of radio sets in the open covered and concealed trenches; radio operation at the projective points.

Veteran soldiers will be given supplementary training in supervision of operation during deployment of radio sets.

Subject 22. The Soviet Union is a Country Where Great Inventions Were Made in the Field of Electricity.

M. P. LOMONOSOV's inventions in the field of electricity; inventions of Russian scientists, PETROU, YAKOBIY, LENETS, YAHLOTSKOU, and LODIGIN in the field of electricity and electromagnet; inventors and discoverers KRUZHANOVSKIY, PONTSBURŠVICH, VOLODIN, VEBSZHENSKIY and other Soviet scholars, their contribution to the world's electrical science; the Soviet Union is a progressive in the field of electricity.

Subject 23. Basic Phenomenon and Laws of the Direct Current

Lesson 1. General concept on electric current, amperage and voltage and units of measurement; general concept on the closed electric circuit; knowledge of instruments for measuring amperage and voltage.

Veteran soldiers will be given supplementary training in use of instruments to measure amperage and voltage.

Lesson 2. Conductor, semiconductor and nonconductor (insulator); general concept on electrical resistance and the unit of measurement; control of electrical resistance by use of different types of material and number; effect of measure upon the resistance of cool powder; practical knowledge on electrical resistance in the telephone components.

Lesson 3. Division of the circuit to the interior and exterior; OHM's Law on all circuits and parts of the circuits; parallel and series connection of resistance; example of resistance used in the schematic diagram a telephone set; general concept on branch circuits.

Veteran soldiers will be given supplementary training in solving problems on OHM's Law.

Lesson 4. General concept on the exothermic function of electric current; mission, structure and function of the anode vacuum tube fuse and its application in the communication equipment.

Subject 24. Capacitance, and Condensers

General concept on capacitance; unit of measurement; general structure and principles of condenser; structures of direct and alternating current condensers; application of condensers in communication equipment.

Subject 25. Wet and Dry Cells

Lesson 1. Types of power sources, and basic types of chemical power sources; general concept on primary and the secondary power source; general concept on the function of cells; structure of the wet cell and the 2B, 3B, 2C and 3C type dry cells, and their electrical data.

Lesson 2. Parallel and series connection of batteries, methods of connection; types of connection and their application BAC-60 and BAC-80 lead batteries and their application.

Veteran soldiers will be given supplementary training in structure of lead batteries and their electrical data.

Subject 26. Magnet and Electromagnet

Lesson 1. Phenomenon of magnet; permanent magnet and its characteristics; palarity of magnets; application of permanent magnet in communication equipment; phenomenon of the electromagnet; magnetic field around the charged conductor; effect upon magnetic needle by a charged conductor; solenoid; solenoid field; solenoid poles.

Lesson 2. Structure and principle of electromagnet; voltage in the circuit and control of magnetic force of attraction by the number of windings; structure and function of the polarized electromagnet; application of electromagnet in communication equipment.

Subject 27. General Concept of Alternating Current

Lesson 1. Methods of obtaining alternating current; characteristics of the alternating current; general concept on high and low frequencies; unit of the measurement of frequency; induction of magnetic coil; general idea on the selfinduction and inductive resistance.

Lesson 2. Function of coil and storage battery in the direct and alternating current circuits; principles of a transformer; general concept on step up and step down transformers; application of transformer in communication equipment.

Subject 28. Establishment of the Terminal and Intermediate Telephone Stations and Duties at the Stations

Note: Veteran soldiers will study the unit commander's duties in supervision of operation in each lesson of this subject.

Lesson 1. Functions of terminal and intermediate telephone stations; establishment of telephone station in the field; performing the duties of telephone men.

Lesson 2. Establishment of telephone station in the forest.

Lesson 3. Establishment telephone station in a room.

Lesson 4. Establishment of a telephone station in a trench (covered trench, cave).

Subject 29. Receiving and Sending of "Dictation" Telephone

Lesson 1. General regulations on the sending and receiving messages by dictation telephone; practice in receiving and sending simple sentence messages by "dictation" telephone.

Lesson 2. Types of "dictation" telephone calls and the order of sending messages; methods of receiving and sending simple messages of military nature by "dictation" telephone while observing the transmission order; practice in transmitting verbal artillery order.

Veteran soldiers will be given supplementary training in receiving and sending messages consisting of complex sentences.

Lesson 3. Sending messages composed of words difficult to transmit by phonetic system; duties of messengers.

Subject 30. Establishment of Central Telephone Station at the Command Post

Note: Veteran soldiers will study the unit commander's duties in supervision of operation in each lesson of this subject.

Lesson 1. Command post, its disposition and mission; organization of communication at the command post; elements of the communication center and their mission; mission and organization of the central telephone station.

Lesson 2. Establishment of central telephone station and the deployment of internal communication at the command post in the field.

Lesson 3. Establishment of central telephone station and deployment of internal communication at the command post in the forest.

Lesson 4. Establishment of the central telephone station and deployment of internal communication at command post in residential area.

Lesson 5. Function of central telephone station; duties of the duty telephone operator and performance of his duty.

Lesson 6. Establishment of the central telephone station and functions during the night.

Subject 31. Methods of Installing Insulated Outdoor Telephone

Note: Veteran soldiers will study the unit commander's duties in supervision of operation in each lesson of this subject.

Lesson 1. Handling and packing of telephone wires for transportation.

Lesson 2. Installation of insulated wire on the ground and in the air in open areas; methods of splicing insulated wires under various conditions; preparation for splicing.

Lesson 3. Installation of insulated wire in an isolated area; installation of insulated wire in the forest; methods of making inspection splice.

Lesson 4. Installation of the insulated wire in wiretrenches and ditches; installation of insulated wire in trenches and communication trenches.

Lesson 5. Installation of insulated wire across roads; methods of installing wires across national highway, unpaved dirt road, and railways.

Subject 32. Practices in Installing Insulated Telephone Wires and Establishment of Terminal and Intermediate Telephone Stations in Various Areas

Note: Veteran soldiers will study the unit commander's duties in supervision of operation in each lesson of this subject.

Lesson 1. Allocation of unit personnel and guards; organization and order of squad operation and execution of the orders "Take engineer tools!" and "Start operation!"; the duties of all guards and their mission during the installation and evacuation of communication wires.

Lesson 2. Methods of installing insulated telephone wires by squad (unit) in an open area; control of a squad (unit) in installing telephone wires; establishment of terminal and intermediate telephone stations; telephone station and telephone wire duties; evacuation of telephone wire; handling and packing of telephone wires for transportation.

Lesson 3. Same as Lesson 2 utilizing skis and ox sleds.

Lesson 4. Installation of communication wires under enemy fire; installation of telephone wires using ox sleds; establishment of telephone station; performing line inspector's duties.

Lesson 5. Installation and evacuation of the insulated telephone wires in isolated areas; splicing insulated wire; changing from single to double lines; evacuation of telephone wires; telephone station and telephone wire duties.

Lesson 6. Methods of splicing insulated telephone wires and installing wires utilizing the trees in forest without road by compass bearing; methods of installing insulated wire on the ground.

Lesson 7. Lesson 6 conducted at night.

Lesson 8. Installation and evacuation of insulated telephone wires in extremely isolated area; splicing and installing insulated wire; trouble shooting telephone wires under enemy fire; telephone station and telephone wire duties.

Lesson 9. Installation of insulated wire in intrenchment and communication trenches; splicing insulated wire; marking telephone wire.

Lesson 10. Lesson 9 conducted at night.

Lesson 11. Installation of insulated telephone wires in residential areas; methods of resplicing insulated wires during installation; methods of installing insulated wires across road; aerial telephone and power lines; methods of installing telephone wire along the buildings through residential areas; establishment of telephone station; telephone wire duties; evacuation of telephone wires.

Lesson 12. Practice by squad (unit) in rapid installation of insulated telephone wires in sweeping fire target area during the day and at night and in an isolated areas, while overcoming minefield and changing communication route.

Subject 33. Operations by Communication KUBUNDAE to Ensure Communications during March and in an Offensive against the Enemy Prepared for Defense

Operation of communication equipment during march; communication with patrols, and guards and among columns; operation order by radio equipment; deployment of wire communication equipment when engaging in combat; deployment of communication center during the transfer of command post (observation post); transfer of communication center during the transfer of command post (observation post); installation of axis of communication; removal of radio set to the new command post (observation post).

B. Training of Radio Operators

First Phase

Purpose of study:

For one-year soldiers: To give the soldiers fundamental knowledge on principles of telephone and radio communication and assigned equipment.

For veteran soldiers: To give the soldiers advanced knowledge on basic radio equipment; to enable the soldiers acquire completence in operation of radio for their qualification (grades).

Subjects and Allocation of Time

Subject Number	Title	Hour	
		All radio operators except those assigned to arty and mortar KUBUNDAE	Radio operators assigned to arty and mortar KUBUNDAE
	One-Year Soldiers		
1	Principles of Sending Messages through Telephone	3	3
2	General Structure of Field Telephone Set	6	6
3	General Structure of a Small Switchboard	2	2
4	General Knowledge on Principles of Radio Communication	3	3
5	General Knowledge on Short-Wave Radio	5	5
6	General Knowledge on Ultrashort-Wave Radios	4	4
7	Duties of Telephone Station Personnal and Regulations on Conducting Telephone Conversation	4	4
8	Methods of Installing the Insulated Outdoor Telephone Wire	6	6
	Total	33	33
	Veteran Soldiers		
	Fundamentals of Radio Equipment		
9	Oscillatory Circuit	4	4
10	Thermionic Amplifier	3	3
11	Thermionic Oscillator and Transmitter	6	6
12	Thermionic Receiver	6	6
13	Oscillation Transformer and Its Function	4	4
	Total	23	23
	PUDAE Radio Set		
14	Elementary Trouble Shooting of Radio Set	12	12
	Total	12	12

Subjects and Allocation of Time (Cont'd)

Subject Number	Title	Hour	
		All radio operators except those assigned to arty and mortar KUBUNDAE	Radio operators assigned to arty and mortar KUBUNDAE
	Operation of Radio Set		
15	Receiving up to 12 (16) CHO per Minute and Increasing Transmitting Speed and Operating Radio-Telephone Maximum Effective Distance	46	58
16	Preparation and Submitting Application for Examination of Third Class (Second Class) Radio Operators	12	-
	Total	58	58

Subjects 1-8 are the same as Subjects 1 to 8 for telephone men

Subject 9. Oscillatory Circuit

Lesson 1. Mechnical oscillation of a pendulum; weakening of the amplitude; alternating current by alternator; amplitude, phase and frequency of alternator, general concept on the wave length; methods of determining the wave length on the basis of frequency and methods of determining the frequency on the basis of wave length; general concept on the designated wave length; methods of determining the frequency and designated wave length.

Lesson 2. Oscillatory circuits and components; general concept on adjustment of amplitude in the circuit; oscillatory circuit components; open oscillatory circuit; changing from closed to open oscillatory circuit.

Subject 10. Thermionic Amplifier

Principle of amplification by triode; knowledge of the structure and function of low frequency amplifier; application of low frequency amplifier to radio sets. Knowledge of the structure and function of the high frequency amplifier; application of high frequency amplifier to radio sets.

Subject 11. Thermionic Oscillator and Transmitter

Lesson 1. Knowledge of diagrams of structure of transmitters; function of a thermionic oscillator; general structure, schematic diagram and parts of the RYOJINGI* of a radio set; general concept on the output amplification and tuning of the output amplifier circuit; mission of the open oscillatory circuit in a transmitter; basic parts of a circuit.

Lesson 2. General concept on the purpose and methods of modulation; knowledge of schematic diagram and function of modulator under study.

Subject 12. Thermionic Receiver

Lesson 1. Knowledge of diagram of the structure of frequency shifting receiver and mission of amplifier stages components of the stages of the high frequency amplifier, first local oscillator and intermediate frequency amplifier; general concept on the process of detection of the modulating oscillation; purpose, components and function of the low frequency amplifier.

Lesson 2. Knowledge of the diagram of wiring principle; general concept on the function of a receiver.

Subject 13. Oscillation Transformer and Its Function

The contents are the same as Subject 12 of the telephone men training schedule.

Subject 14. Elementary Trouble Shooting of Radio Sets

Lesson 1. Trouble shooting Transmitter-receiver; inspection and replacement of fuse; inspection of power source for serviceability and proper connection; checking the voltage of power source at terminal board and input.

Lesson 2. Trouble shooting a transmitter; inspection and replacement of pilot lights; inspection of the plate voltage at the terminal, power source box and power line terminal strip trouble shooting during the transmission of telegraphic message; inspection of the telegraphic key of line and plugs, methods of determining the causes of malfunction in transmitter during telephone transmission; inspection of the connecting point of the protective cover of a transmitter; replacement of earphones; inspection of transmitter-receiver lines; methods of determining the necessity of replacing vacuum tube of transmitters.

Lesson 3. Trouble shooting transmitter; inspection of plate battery connections, inspection of power source terminal board for correct wiring, inspection and adjustment of transmitters; methods of determining the necessity of replacing vacuum tube of receivers.

Subject 15. Receiving up to 12 (16) CHO per Minute and Increase in Transmitting Speed and Operating Radio-Telephone Operation at Maximum Effective Distance

Lesson 1. Methods of increasing receiving speed in all types of radio telegrams up to 12 CHO per minute; transmitting all types of radio telegrams at speed of 11 CHO per minute; practice in alternate reception and transmission of messages (up to 200 CHO).

Lesson 2. Radio operation within the channel; monitoring duty, communication control and shifting from one wave length to another, transmitting and receiving all types of radio telegrams; operations without call signals.

Lesson 3. Methods of increasing receiving speed up to 12 CHO per minute and transmitting all types of radio telegrams at speed of 12 CHO per minute under normal amount of radio interference and low sensitivity.

Lesson 4. Receiving all types of radio telegrams at speed of 12 CHO per minute under high radio interference; transmitting all types of radio telegrams at speed of 12 CHO per minute methods of sending dictated messages; order of changing the radio transmission data.

Lesson 5. Radio operation; receiving and transmitting multiple telegrams; transfer of the function as a main radio of a network to another radio within the same network; receiving and sending telegrams by PUDAE; receiving and transmitting radio signals and routine telegram.

Lesson 6. Receiving and transmitting messages between two stations and among all stations within the same net;

Standard of speed in receiving and transmitting messages:

400/250 CHO per hour excellent

350/225 " " " fair

300/200 " " " satisfactory

Review of all regulations on receiving and transmitting radio messages.

Lesson 7. Radio operation; monitoring duty; receiving and transmitting all types of radio telegrams at speed designated in Lesson 6; methods of transferring radio from the net to channel operation; control of communications with stations in the adjacent net.

Lesson 8. Methods of the qualification of radio operators in receiving messages under radio interference and in transmitting all types of radio telegrams at the speed of 12 CHO per minute;

Standard (100 CHO telegram)

Excellent, no mistake in spelling

Fair, one mistake in spelling;

Satifactory, less than two mistakes in spelling

Determination of the qualification of radio operators for speed and accuracy in receiving and transmitting radio telegrams in the channel and net based on standard designated in Lesson 6.

Subject 16. Preperation and the Submitting Application for Examination of Third Class (Second Class) Radio Operators

Lesson 1. Receiving messages with low signal strength but without radio interference and transmitting all types of radio telegrams at speed of 12 (16) CHO* per minute; receiving and transmitting messages within the channel designated in accordance with regulations governing examinations for the grade.

Lesson 2. Methods of operating radio for telegraphic operation at maximum effective distance in various channels under all anticipated operating conditions prescribed by instructions for determining qualification of radio operators.

Lesson 3. Application for examination as third class (second class) radio operator.

Second Phase

Purpose: To familiarize soldiers with the knowledge of the structure of radio set and operation of receiver and transmitter for

transmission of radio messages; to enable one-year soldiers to receive and transmit messages at seven CHO* per minute; and to train the veteran soldiers as radio operators capable of receiving and transmitting at 14 (16) CHO* per minute.

Subjects and Allocation of Time

Subject Number	Title of Subject	Hour	
		All radio operators excluding those in arty and mortar KUBUNDAE	Radio operators in arty and mortar KUBUNDAE
	All Soldiers		
	PUDAE Radio Set		
17	Structure of Short-Wave Radio Set	12	12
18	Preparation for Radio Operation	8	8
19	Knowledge on Diagram of the Structures of Receiver and Transmitter	6	6
20	Structure of Ultrashort-Wave Radio Set and Regulations on Its Use	12	12
	Total	38	38
	Radio Engineering		
21	The Soviet Union is a Country Where Great Inventions Were Made in the Field of Electricity	2	2
22	Basic Phenomenon and Laws of Direct Current	6	6
23	Magnet and Electromagnet	4	4
24	Basic Phenomenon of Alternating Current	8	8
25	Knowledge of Vacuum Tubes	4	4
	Total	24	24
	Operation of Radio Set		
26	Study of the Telegraphic and Operation of Radio-Telephone	109/113	109
27	Methods of Increasing Receiving Transmitting Speed to 7 CHO* per Minute	24/24	12
	Total	133/137	121

Subjects and Allocation of Time (Cont'd)

Subject Number	Title of Subject	Hour	
		All radio operators excluding those in arty and mortar KUBUNDAE	Radio operators in arty and mortar KUBUNDAE
	Special Tactical Training		
28	Operations for Ensuring Communications by the Communication KUBUNDAE during March and during Offensive against an Enemy which has Switched to the Defensive	8/8	-
	Participation in the Commanding Staff Training	16/-	-
	Participation in the General Arms and Services Tactical Training on Subjects 21 and 22 and Subject 20 for Infantry KUBUNDAE	22/34	-
	Total	46/42	-
	Grand Total	241/241	183

Notes: 1. The numerator and denominator indicate the time for communication company and platoon, respectively.

2. Radio operators of artillery and mortar KUBUNDAE will study the special tactical training problems in the joint training, and during the maneuver of their KUBUNDAE.

3. During study of Subjects 25 and 27, veteran soldiers will practice to increase receiving and transmitting speeds to 14 (16) CHO* per minute, and improve their skill in radio-telephone operation.

Subject 17. Structure of Short-Wave Radio Set

Lesson 1. Basic parts of a radio set and their packing within the radio set box; tactical-technical data of a radio set; general characteristics and mission of a radio set; effective distance of various types of antenna; effective life of power source before replacement; conversion of disignated wave length into frequency band (designated wave length, frequency and meter), frequency and meter.

Lesson 2. Function, types and structure of the radio antenna; deployment of CHIPPOLLI* and its joining to the transmitter-receiver; changing of the length of a CHIPPOLLI* by a small frequency band; structure of antenna lead-in and high antenna.

Lesson 3. Structure of the control panels of receiver and transmitter; nomenclature and function of control knobs and switches.

Veteran soldiers will be given supplementary training in: Functional change within receiver and transmitter when control knobs and switches are operated.

Lesson 4. Function of radio power source; dry cells and their structure; installation of lead batteries in a power source box; switching lead batteries when run down; connecting power source box to transmitter-receiver.

Veteran soldiers will be given supplementary training in determination of serviceability of radio power source.

Lesson 5. General structure of the alkaline storage battery of a small output radio set; its electrological data and function; installation of storage batteries in power source box; determination of polarity of a battery; checking the voltage of storage batteries and plate batteries; function of a fuse; inspection and replacement of fuse.

Lesson 6. Preparation for charging alkaline storage batteries; knowledge on charging a storage battery, regulations on the use of an alkaline storage battery; effect of temperature on the function of alkaline storage battery; maintaining records.

Veteran soldiers will be given supplementary training in procedures for distributing batteries to teams for charging.

Lesson 7. Function and principles of an oscillation transformer; general structure of a radio oscillation transformer and regulations on its use; structure of type DFP direct current generator with hand cranking feature; electrological data of a direct current generator and regulations on its use.

Veteran soldiers will be given supplementary training in schematic diagram of an oscillation transformer and study of its function.

Subject 18. Preparation for Radio Operation

Lesson 1. Selection of site for deployment of radio sets; deployment of radio sets in an open area and preparation for operation.

Lesson 2. Selection of antennas for different distances; deployment, camouflage and preparation for the operation of a radio set in trenches, covered trenches and caves; methods of maintaining and protecting radio sets.

Veteran soldiers will be given supplementary in supervision of operation during the deployment of a radio set.

Lesson 3. Tuning receivers to the designated wave length; tuning receivers for telegraphic and telephone operation; checking receiver for normal operation; methods of tuning receivers to the designated wave length by the wave length of a transmitter.

Lesson 4. Tuning receivers to the designated wave length; tuning receivers to various designated wave lengths for telegraphic and telephone operation; checking receivers for normal operation; switching from transmitting to receiving and vice versa; tuning receivers to the disignated wave length by the wave length of another receiver.

Veteran soldiers will be given supplementary training in general concept on the processes involved in tuning receivers and transmitters.

Subject 19. Knowledge on Diagrams of the Structures of Receiver and Transmitter

Lesson 1. Radio transmitter as an equipment which converts direct current energy into high frequency electric current energy; basic parts of a transmitter and their mission; basic tools for adjusting the transmitter.

Veteran soldiers will be given supplementary training in lessons covering the various stages of the receiver.

Lesson 2. Mission of a receiver which converts high frequency electric current into low frequency electric current energy; general concept on the mission of the basic caskets of a receiver; tools for making basic adjustment of a receiver.

Veteran soldiers will be given supplementary training in caskets of a receiver.

Subject 20. Structure of Ultrashort-Wave Radio Set and Regulations on its Use

Lesson 1. General concept on various characteristics of the ultrashort wave; basic components of a radio set; their mission and general structure; tactical-technical data of a radio set; types of radio antennas and its mission.

Lesson 2. Nomenclature and mission of the front panel, control knobs and switches of a radio set; tuning of a transmitter-receiver.

Veteran soldiers will be given supplementary training in general concept on processes involved in tuning of a radio set.

Lesson 3. Power source of a radio set; installation of power source; inspection of the power source for serviceability; structure of the oscillation transformer and regulations on its use.

Lesson 4. Selection of site for deployment of radio sets; preparation for radio operation; tuning of a radio set; sending and receiving of radio signals and simple radio telegrams; methods of utilizing radio sets for telephone communication.

Lesson 5. Deployment of radio sets in buildings, intrenchments trenches, covered and other concealed trenches; radio operation in a protuding front.

Veteran soldiers will be given supplementary training in supervising the operation during deployment of radio sets.

Subject 21. The Soviet Union is a Country Where Great Inventions Were Made in the Field of Electricity

This subject is the same as Subject 22 of the telephone men training.

Subject 22. Basic Phenomenon and Laws of Direct Current

The contents are the same as Subject 23 of the telephone men training.

Subject 23. Magnet and Electromagnet

Lesson 1. Magnetic phenomenon, permanent magnet and its characteristics, general concept on magnetic field; magnetic field around the conductor passing electric current solenoid, poles of solenoid.

Lesson 2. General structure and principles of electromagnet; general concept on the polarized electromagnet; application of the electromagnet in a communication equipment; generation of electromotive force and inductive electric current; general concept on the structure and function of a transformer and automatic transformer.

Veteran soldiers will be given supplementary training in electromagnet, parts structure and function of transformers.

Subject 24. Basic Phenomenon of Alternating Current

Lesson 1. General concept on methods of obtaining alternating current, variable of the alternating current — cycle, amplitude and frequency, and high and low frequency; definition of frequency; general concept on the wave length.

Veteran soldiers will be given supplementary training in determination of wave length by frequency and determination of frequency by wave length.

Lesson 2. General concept on the self-inductunce and inductive resistance; form of self-inductunce coil used in radio sets; high and low frequency; general structure of choke coil and its function in the alternating current circuit.

Lesson 3. General concept of the electrical capicitance; general structure of direct current and alternating current capacitors; types of capacitors used in radio sets; functions of capacitors in direct and alternating current circuits.

Lesson 4. Knowledge on the oscillatory circuits and its components; general concept on generation of high frequency and electromagnetic oscillation.

Veteran soldiers will be given supplementary training in parts and functions of oscillatory circuit.

Subject 25. Knowledge of Vacuum Tubes

Lesson 1. General structure of a vacuum tube and its principles; functions of anods and cathode; simplest diode vacuum tube, basic characteristics of the diode vacuum tube and its application.

Lesson 2. Triode, general concept on the function of the filament of vacuum tube, application of triode, general concept on the function of the vacuum tube oscillator and amplifier; knowledge of tetrode.

Veteran soldiers will be given supplementary training in diagram of simplest wiring principles of vacuum tube oscillator and amplifier.

Subject 26. Study of Telegraphic Code and Operation of Radio-Telephone

Lesson 1. Correct sitting position; position of hands and body for receiving; methods of recording code; methods of receiving the codes ㄱ, ㄴ, and ㄷ and grouping them into proper combinations; correct position of the hands and body for transmission; procedure for adjusting the key, methods of operating the key.

Lesson 2. Methods of receiving the codes ㄹ, ㅁ, ㅂ, and ㅅ, and grouping them in proper combination with codes already memorized; general concept of radio net and radio channels; knowledge of radio data (call signs, wave lengths) for radio operation; transmitting dots.

Lesson 3. Methods of receiving the codes, ㅇ, ㅈ, and ㅊ and grouping them in proper combination with codes already memorized; supplying proper titles to radio telegrams; transmitting dashes types of radio telegrams.

Lesson 4. Methods of receiving the codes ㄱ, ㄷ, and ㅏ and grouping them in proper combination; receiving telegrams composed of codes already memorized; records maintained by the duty radio operators; transmitting sentences composed of dots; study of regulations on communication control by telephone.

Lesson 5. Methods of receiving the codes, ㅏ, ㅑ, ㅓ, and ㅕ and grouping them in proper combination; receiving telegrams composed of codes already memorized; transmitting sentences composed of dashes; study of regulations on the exchanging of radio telephone calls by telephone.

Lesson 6. Methods of receiving the codes ㄴ, ㅁ, ㅗ, and ㅛ and grouping them in proper combination; methods of recording incoming radio telegrams; transmitting combinations of dots and dashes; making entries in radio log.

Lesson 7. Tuning receiver for telephone operation, wave length in various minor frequency lands, methods of tuning receiver to a call on different wave length from the prescribed wave length.

Lesson 8. Receiving telegrams composed of signals already memorized; study of duties of the duty radio operators, transmitting combinations of dots and dashes, procedure for transmitting radio telegrams; making inquiries by telephone regarding cryptogram.

Lesson 9. Tuning receiver to telephone operation, receiving radio signals, communication control, receiving and sending brief telegrams by telephone; confirm the operation of the other party at a musical tone of 10-15 designated wave length.

Lesson 10. Methods of receiving the codes ㅜ, ㅠ, ㅡ, ㅣ, question marks and "dividing" marks and grouping them in proper combination; transmitting combinations of dots and dashes; radio telegram operation.

Lesson 11. Radio-telephone operations in the radio channel; assuming radio duty; making inquiries and issuing orders regarding cryptograph for communication control; exchange of crypotgrams, radio signal and short telegram.

Lesson 12. Methods of receiving the codes, /, ·, 8, 2, 1, and 9, and grouping them in proper combination; transmitting combinations of dots and dashes.

Lesson 13. Methods of receiving the codes 3, 7, 6, 4, 5, 0, and grouping them in proper combination; methods of receiving sentences composed of codes already memorized; transmitting the codes ㅈ, ㅊ, ㅓ, ㅕ, 0 (zero), ㅂ, ㅅ, ㅡ, ㅣ, 5.

Lesson 14. Telephone operation in a radio net; assuming radio duty; control of communications with network radio sets, exchanging of telegrams; transmission of multiple telegrams.

Lesson 15. Improving the accuracy in receiving telegraphic codes, receiving mixed radio telegrams within the team at the speed of six CHO* per minute; study of regulations on the control of communications by telegram; transmission of codes, ㅋ, ㅌ, 4, ㅇ, ㄹ, ㅁ, 6 and "large division".

Lesson 16. Receiving of mixed radio telegrams at the speed of six CHO* per minute under low radio interference transmission of codes ㄴ, ㅡ, ㅎ, 1, 2, 3, ㄹ, 0, ㅠ, 9, 8, and 7.

Lesson 17. Receiving and types radio telegrams at the speed of six CHO* per minute under low radio interference, transmission of codes ㅜ, ㅓ, ㅠ, ㅣ, ㅚ, question mark, ㅏ, ㅓ, ㅛ, ㅠ, etc; practice in sending radio telegrams consisting of sentences in alphabet and figures codes.

Lesson 18. Transmission at six CHO* per minute when radio interference is weak to determine the capabilities of receivers;

Evaluation (50 CHO* message):

Excellent -- no mistake

Fair -- one mistake

Satisfactory -- two mistakes

Test of men on their knowledge of codes used in routine operation and regulations on the use of radio sets.

Note: The standard radio language and signals and Q and Z signals (signals used by automatic transmittors) will be studied in the lessons in which the appopriate codes appear.

Subject 27. Methods of Increasing the Receiving and Transmitting to Seven CHO* per Minute

Lesson 1. Regulations requiring confirmation of all CHO* received incorrectly or doubtful; practice in sending radio telegram composed of sentences expressed in alphabet and numerical codes at 6 CHO per minute; regulations on confirmation of radio telegrams by reverse transmission.

Lesson 2. Methods of receiving radio telegrams composed of all types of sentences when radio interference is weak; utilization of the cryptograph list and transmission of multiple telegrams; transmission of radio telegrams composed of all types of sentences up to 100 CHO* in length without interuption, procedure for requesting delivery of crypographic codes by telephone.

Lesson 3. Receiving under normal amount of radio interference; transmission of radio telegrams composed of all types sentences at seven CHO* per minute; radio signals; familiarity with the list of unit designations for the staff section and key personnel.

Lesson 4. Radio telephone operation; assuming radio duty; communicati control; exchanging of mixed radio telegrams; transfer of operation from radio channel from the radio net; transmission of the radio signals and the return to assigned radio net.

Lesson 5. Methods of receiving signals utilizing fixed and call radio sets without reference; order of radio signals transmission.

Lesson 6. Receiving all types of radio telegrams at seven CHO* per minute when radio interference is normal, and test of transmission proficiency.

Evaluation (50 CHO message):

Excellent -- no mistake

Fair — one mistake

Satisfactory — two mistakes

Test of duty radio operators for proficiency in logging radio document knowledge of regulations on receiving and transmitting radio messages.

Subject 28. Operations for Ensuing Communications by the Communication KUBUNDAE during March and during Offensive against an Enemy Which has Switched to the Defensive

This subject is the same as Subject 33 on telephone men training.

V. Chemical Defense KUBUNDAE

Purpose

1. To familiarize one-year soldiers with technical equipment and their operation; the basic characteristics of toxic agents, antiseptic material, smoke agents, and incendiary compounds; and method of utilizing antichemical equipment; and to train soldiers in decontamination and chemical reconnaissance.

2. To perfect the seasoned soldiers' skill in chemical reconnaissance and decontamination activities and to train the chemical defense platoon in the use of special vehicles (equipment) included in the arms belonging to the KUBUNDAE (on the basis mutual instruction).

3. To train the squad (component, crew) and platoon in the mission of the decontamination station.

Instruction on Methods

1. Special classroom or field training shall be carried out by utilizing visual aid, sample toxic agents, chemical defense equipment, study material and technical equipment.

2. Lessons dealing with toxic agents shall be given only at the chemical training field. Safety measures will be observed.

3. During the lessons on the structure of special vehicles and equipment the duties of these vehicle crews shall also be studied. Emphasis must be placed on prompt combat preparation of vehicles and equipment.

4. After the individual squad (component, crew) members, who are one-year soldiers have learned their duties, later training will be carried out on the basis of mutual instruction within the squad (component, crew).

5. To expand their knowledge about special training and to perfect their skills, seasoned soldiers shall undertake the following supplementary training:

1) In the chemical defense squad — chemical officer's duties when the battalion (company) carries out decontamination, establishes chemical defense shelters, and overcomes contaminated areas.

2) In the chemical defense platoon (company) — how to execute the duties of the combat vehicle commander during the organization and execution of decontamination activities at the decontamination station and the duties of the chemical reconnaissance unit commander, chemical observation post chief, sentry post chief, and others.

Subjects and Allocation of Time

Subject Number	Title	Hours				
		Chemical Defense Squad	Chemical Defense Platoon (Company)			
			Reconnaissance Troop	Decontamination Equipment		
				Weapons and Technical Equipment	Clothing and Equipment	Area
	1st Phase					
	One-Year Soldiers					
1	Toxic Agents Used by Foreign Troops	—	10	10	10	10
2	Chemical Defense Equipment	—	15	15	15	15
3	Vehicles and Equipment for Decontamination Technical Equipment, Clothing, and Area	—	12	12	12	12
	Total	—	37	37	37	37
	Seasoned Soldiers					
4	Equipment for Chemical Attack and Equipment for Chemical Defense Used by Foreign Troops	6	6	6	6	6
5	Chemical Defense Equipment for Group Use	12	6	6	6	6
6	Overcoming Contaminated Areas	12	4	4	4	4
7	Chemical Reconnaissance Equipment	20	20	4	4	4
8	Vehicles and Equipment for Decontaminating Weapons and Technical Equipment	—	8	20	8	8
9	Vehicles and Equipment for Decontaminating Clothing and Equipment	—	8	12	24	12
10	Vehicles and Equipment for Decontaminating an Area	4	4	4	4	4
	Total	54	56	56	56	56

Subjects and Allocation of Time (Cont'd)

Subject Number	Title	Hours				
		Chemical Defense Squad	Chemical Defense Platoon (Company)			
			Reconnaissance Troop	Decontamination Equipment		
				Weapons and Technical Equipment	Clothing and Equipment	Area
	Special Tactical Training					
	Seasoned Soldiers					
11	Chemical Reconnaissance	26	26	6	6	6
12	Decontamination of Weapons and Technical Equipment under Various Combat Situations and Conditions	16	12	32	10	10
13	Decontamination of Clothing and Equipment	—	10	10	32	10
14	Decontamination of an Area	12	4	4	4	26
	Total	54	52	52	52	52
	Second Phase					
	All Soldiers					
15	Toxic Agents Used by Foreign Troops	15	—	—	—	—
16	Chemical Defense Equipment	18	8	8	8	8
17	Chemical Reconnaissance Equipment and Meteorological Observation Equipment	42	42	12	12	12
18	Decontamination Material and Solvents	10	10	10	10	10
19	Vehicles and Equipment for Decontaminating Weapons and Technical Equipment	8	8	38	8	8

Subjects and Allocation of Time (Cont'd)

Subject Number	Title	Hours				
		Chemical Defense Squad	Chemical Defense Platoon (Company)			
			Reconnaissance Troop	Decontamination Equipment		
				Weapons and Technical equipment	Clothing and Equipment	Area
20	Vehicles and Equipment for Decontaminating Clothing and Equipment	—	12	12	42	12
21	Vehicles and Equipment for Decontaminating an Area	8	8	8	8	38
22	Smoke-Screen Equipment and the Use of Smoke Screen	8	8	8	8	8
23	Flame-Throwing and Incendiary Equipment	10	10	10	10	10
24	Model Chemical Equipment	6	6	6	6	6
	Total	125	112	112	112	112
	Special Tactical Training					
25	Chemical Reconnaissance	47	43	13	13	13
26	Actions to be Taken by the Squad (Crew) when Decontaminating Weapons and Technical Equipment	20	16	46	16	16
27	Actions to be Taken by Crew Members during Decontamination of Clothing and Equipment	—	15	15	45	15
28	Actions to be Taken by the Squad (Crew) during Decontamination of an Area	13	7	7	7	37
29	Actions to be Taken by the Platoon During the Deployment of a Decontamination Station and Its Operations	—	16	16	16	16

Subjects and Allocation of Time (Cont'd)

Subject Number	Title	Hours				
		Chemical Defense Squad	Chemical Defense Platoon (Company)			
			Reconnaissance Troop	Decontamination Equipment		
				Weapons and Technical Equipment	Clothing and Equipment	Area
30	Actions to be Taken by the Chemical Defense Platoon (Company) during Offense	—	16	16	16	16
	Participation in the General Arms and Services Tactical Training in Subjects 19, 21, and 22 and Participation in the Lessons under Subject 20 of the Infantry KUBUNDAE	42	—	—	—	—
	Participation in the General Arms and Services Tactical Training under Subject 22 and Participation in the Lessons under Subject 20 of the Infantry KUBUNDAE	—	22	22	22	22
	Total	122	135	135	135	135

1st Phase

Subject 1. Toxic Agents Used by Foreign Troops

Lesson 1. Preparing for enemy chemical attack; chemicals as a weapon of massacre; chemical soldiers' responsibility to know toxic agents used by foreign troops.

Lesson 2. General knowledge of toxic agents (ov); mission; combat use of toxic agents and their effect on the organs (body); general knowledge of the concentration of toxic agents; and degree of contamination.

Lesson 3. Characteristics of persistent toxic agents; its effect on the human body; and contamination of material and food.

Lesson 4. Characteristics of nonpersistent toxic agents; utilization of toxic agents in combat; and their effect on the human body, objects, and food.

Subject 2. Chemical Defense Equipment

Lesson 1. Presentation of chemical defense equipment for individual use, chemical defense equipment for group use, and understanding their mission, superiority of the chemical defense equipment of the Korean People's Army; and the role played by the Soviet scholars in the creation of the best chemical defense equipment in the world.

Lesson 2. Purpose and structure of the general arms and services gas masks; method of selecting gas-proof hats and method of assembling and inspecting a gas mask and putting it into its carrier; inspection to determine effectiveness of gas mask; method of preventing the eyepiece from getting cloudy; and preservation and protection of gas masks.

Lesson 3. Regulations on utilization of gas masks; and utilization of KOPPUKALLITTUT'ÄN**.

Lesson 4. Purpose, structure, and regulations on the utilization of gas-proof cloak, gas-proof bag, gas-proof stockings, gas-proof blankets, and gas-proof coverall.

Lesson 5. Purpose, structure, and regulations on the utilization of gas-proof clothing.

Lesson 6. Purpose, structure, and regulations on the utilization of individual antichemical bucket.

Subject 3. Vehicles and Equipment for Decontaminating Technical Equipment, Clothing, and Areas

Lesson 1. Understanding the mission, structure, and tactical — technical capacity of an automatic decontamination vehicle, and knapsack decontamination device for decontaminating weapons and technical equipment; and supply of materials for vehicles.

Lesson 2. Mission of automatic decontamination vehicles for decontaminating clothing and equipment; and understanding its general structure and tactical-technical capacity.

Lesson 3. Mission, structure, and tactical-technical capacity of washing equipment.

Lesson 4. Understanding the mission, structure, and tactical-technical characteristics of area decontamination vehicles and equipment.

Subject 4. Equipment for Chemical Attack and Equipment for Chemical Defense Used by Foreign Troops

Lesson 1. Chemical equipment (chemical vehicles, chemical shells, chemical mortar shells, chemical fougasse, bombs, sample-testing apparatus used by foreign troops and their basic tactical-technical data; and markings on the chemical shells.

Lesson 2. Chemical defense equipment (gas masks, gas-proof clothing, gas-proof cloak, ointment, and decontamination material) used by foreign troops.

Lesson 3. Smoke-screen equipment and flame-throwing equipment used by foreign troops; and their classification, use, and ways of countering incendiary compounds.

Subject 5. Chemical Defense Equipment for Group Use

Lesson 1. Purpose and structure of a shelter trench with antichemical facilities, and regulations on the utilization of shelter trenches.

Lesson 2. Purpose and structure of ventilator, and installation of ventilator in shelter trenches.

Lesson 3. Antichemical facilities of a shelter trench, intrenchment, and of communication trench under masked fortifications; devising ventilator with available equipment.

Subject 6. Overcoming Contaminated Areas

Lesson 1. Equipment for overcoming contaminated areas; and their structure and utilization.

Lesson 2. Peculiarities of a contaminated area in winter; preparations; donning protective equipment just before entering contaminated area; marching through contaminated area; and digging in and launching fire in a contaminated area.

Lesson 3. Determining the safe zone for relocating gas-proof equipment after overcoming a contaminated area; removing gas masks, protective clothing, and gas-proof equipment; decontamination of personnel; and initial decontamination of weapons.

Subject 7. Chemical Reconnaissance Equipment

Lesson 1. Nature of operations to be carried out with chemical reconnaissance equipment under winter conditions.

Lesson 2. How to detect persistent and nonpersistent toxic agents both in the air and on the ground; by utilizing chemical reconnaissance equipment; and sampling chemical agents.

Lesson 3. Lesson 2 is reviewed at night.

Subject 8. Vehicles and Equipment for Decontaminating Weapon and Technical Equipment

Lesson 1. Operating characteristics of an automatic decontamination vehicle under winter conditions.

Lesson 2. Setting up the automatic decontamination vehicle; decontamination activities of the crew members; mutual instruction by crew members, and evacuation of automatic decontamination vehicles.

Lesson 3. Lesson 2 is reviewed at night.

Lesson 4. How to use the automatic decontamination vehicle in re-equipping the artillery decontamination equipment, machine gun and mortar decontamination equipment, and knapsack decontamination equipment.

Lesson 5. Actual re-equipment of decontamination equipment.

Lesson 6. The crews' inspection procedure for automatic decontamination vehicle.

Lesson 7. Method of preparing decontamination solvents Nr 1 and Nr 2 for use in the automatic decontamination vehicle.

Subject 9. Vehicles and Equipment for Decontaminating Clothing and Equipment

Lesson 1. Operating characteristics of vehicles and equipment in winter.

Lesson 2. Setting up the automatic decontamination vehicle for decontamination of clothing and equipment; decontamination of clothing; mutual training by the crew; evacuation of the automatic decontamination vehicle.

Lesson 3. Malfunction of the automatic decontamination vehicle in decontaminating clothing and equipment, and their discovery and elimination.

Lesson 4. Inspection of the vehicle and its daily maintenance; and how to prevent breakdowns.

Lesson 5. Lesson 2 is reviewed at night.

Lesson 6. Setting up the washing equipment; decontamination; and evacuation of washing equipment.

Lesson 7. Lesson 6 is reviewed at night.

Subject 10. Vehicles and Equipment for Decontaminating an Area

Lesson 1. Duties of the commanding officer of the decontamination vehicle crew (component); and, decontaminating material consumption standards.

Lesson 2. Preparing to decontaminate the area by using vehicles (equipment); duties of the members (crew).

Lesson 3. How to decontaminating material in a vehicle; and actual decontamination operation.

Subject 11. Chemical Reconnaissance

Lesson 1. Organization and armament of enemy chemical PUDAE and chemical KUBUNDAE.

Lesson 2. Type of clothing and insignia used by foreign chemical troops; and markings on combat vehicles and special vehicles.

Lesson 3. Duties and actions of the patrol leader and chemical patrols during reconnaissance of engineer-chemical obstacles and chemical fougasse field in contaminated areas.

Lesson 4. Chemical reconnaissance patrols' utilization of chemical defense and attack equipment.

Lesson 5. Lesson 4 is reviewed at night.

Lesson 6. Duties and actions to be carried out at the chemical observation post by day and by night.

Subject 12. Decontamination of Weapons and Technical Equipment under Various Combat Situations and Conditions

For chemical defense platoon (company)

Lesson 1. Actions to be taken by the vehicle commander and crew members during the deployment of the automatic decontamination vehicles, during preparation for their operation, and during decontamination under combat conditions, of weapons and technical equipment; and evacuation of automatic decontamination vehicles after operation.

Lesson 2. Lesson 1 is reviewed at night.

Lesson 3. Actions to be taken by automatic decontamination vehicle commanding officer and crew members during decontamination operation (in the danger area) of the directly contaminated combat equipment.

For chemical defense squad

Lesson 4. Chemical officer's duties in connection with decontamination operations (carried out within the KUBUNDAE's combat position) for decontamination of weapons and technical equipment.

Lesson 5. Method of decontaminating weapons and technical equipment with antichemical bucket, machine gun and mortar decontamination equipment artillery decontamination equipment, and knapsack decontamination equipment.

Lesson 6. Actions to be taken by the chemical officer during decontamination of weapons and technical equipment by a company (battalion).

Subject 13. Decontamination of Clothing and Equipment

Lesson 1. Peculiarities of clothing and equipment decontamination under winter conditions.

Lesson 2. Actions to be taken by automatic decontamination vehicle commanding officer and crew members during deployment of automatic decontamination vehicles for decontaminating clothing and equipment.

Lesson 3. Actions of the decontamination vehicle commanding officers and crew members when piling contaminated goods in a decontamination room and during decontamination; and supervision of and observation of the decontamination system.

Lesson 4. Actions of decontamination vehicle commanding officers and crew members during the unloading of contaminated goods.

Lesson 5. Actions to be taken by the decontamination vehicle commanding officers and crew members during the evacuation of decontamination vehicles.

Lessons 6, 7, and 8. Lessons 2, 3, and 4 are reviewed at night.

Lesson 9. Duties of the commanding officer and his men during the field operations, deployment of washing equipment, and the preparation stage.

Lesson 10. Actions to be taken by washing equipment commanding officers and crew members when loading contaminated goods in the washing equipment and when decontaminating clothing and equipment.

Lesson 11. Actions to be taken by washing equipment commanding officers and his men when unloading decontaminated goods, wringing them, drying them, and evacuating them.

Lessons 12, 13 and 14. Lessons 9, 10, and 11 are reviewed at night.

Subject 14. Decontamination of an Area

Lesson 1. Combat formation of the decontamination vehicles when decontaminating routes and fields depending upon size of area and wind direction.

Lesson 2. Method of decontaminating routes and plazas with vehicles equipped with suspension-type equipment for decontamination of an area.

Lesson 3. How to open passages in a contaminated area by removing and burying contaminated layers of earth (snow) and how to isolate the contaminated earth (snow).

Lessons 4 and 5. Lessons 2 and 3 are reviewed at night.

Second Phase

Subject 15. Toxic Agents Used by Foreign Troops

Lessons 1 thru 4 (only for chemical defense squad).

Same as Lessons 1 thru 4 of Subject 1.

Subject 16. Chemical Defense Equipment

Lessons 1 thru 5 (only for chemical defense squad).

Same as Lessons 2 thru 6 of Subject 2.

Lesson 6. Inspecting gas mask for leaks in a gas box, using 0.85 g/m^3 and 8.5 g/m^3 chloropicrin concentration.

Lesson 7. Finding malfunctions in gas masks and utilizing damaged gas masks in contaminated areas.

Lesson 8. Utilization of individual anti-chemical buckets.

Lesson 9. Repairing chemical defense equipment.

Subject 17. Chemical Reconnaissance Equipment and Meteorological Observation Equipment

Note: Chemical defense squad and chemical reconnaissance squad of the chemical defense platoon (company) will study all subjects and other specialists will study Lessons 1, 2, 4, 5, and 8.

Lesson 1. Method of locating toxic agents by means of telltale signs in the air and in the field; and general instructions on how tests for toxic agents are made with the aid of equipment.

Lesson 2. Purpose and structure of equipment used for chemical reconnaissance.

Lesson 3. How to detect nonpersistent toxic agents by use of chemical reconnaissance of equipment.

Lesson 4. How to detect by means of chemical reconnaissance equipment, persistent gas in the air and persistent toxic liquids in the field; and decontamination of equipment after operation.

Lesson 5. Finding toxic agents in smoke screens; and procedure for picking samples of smoke screen.

Lesson 6. How to check the operation of chemical reconnaissance equipment and how to eliminate troubles.

Lesson 7. Actual chemical reconnaissance to determine unknown toxic agents.

Lesson 8. Purpose and structure of outdoor wind gauge and thermometer; and their operation.

Lesson 9. Reconnaissance using hygrometer and its operation.

Lesson 10. Meteorological observation using instruments.

Subject 18. Decontamination Material and Solvents

Lesson 1. Decontamination method; and decontamination material and solvents.

Lessons 2, 3, and 4. Decontamination material, its characteristics, application, and basis for utilization; storage and transportation; safety measures during operation; and preparing decontamination solvents.

Lesson 5. Solvents used for decontamination and their characteristics; and method of applying solvents for decontaminating persistent toxic agents.

Subject 19. Vehicles and Equipment for Decontaminating Weapons and Technical Equipment

Note: Decontamination personnel (weapons and technical equipment) will study all lessons and other specialists will study Lessons 1, 3, 4, and 6.

Lesson 1. Method of decontaminating weapons and technical equipment as well as other equipment.

Lesson 2. Mission, structure, and tactical-technical data an automatic decontamination vehicle for decontaminating weapons and technical equipment; supply of decontamination material and their loading order.

Lesson 3. Structure and mission of groups of automatic decontamination vehicles, and regulations on handling; care and protection of vehicle.

Lesson 4. Preparing decontamination solutions for decontaminating weapons and technical equipment; preparing an automatic decontamination vehicle for decontaminating weapons and technical equipment; and loading of an automatic decontamination vehicle.

Lesson 5. Deployment of automatic decontamination vehicle; establishment of decontamination station; and evacuation of decontamination vehicle.

Lesson 6. How to completely decontaminate motor vehicles, tanks, guns, morters, and cavalry carbines by using automatic decontamination vehicles.

Lesson 7. Mission, structure, and tactical-technical characteristics of knapsack decontamination equipment.

Lesson 8. Preparing knapsack decontamination equipment and accessories; care and repair of automatic decontamination equipment.

Lesson 9. Decontamination of transport vehicles and technical equipment by using knapsack decontamination equipment.

Lesson 10. Purpose and structure of machine gun and mortar decontamination equipment and artillery decontamination equipment; and rules on decontamination procedure.

Lesson 11. (Final lesson) Deployment of automatic decontamination vehicles for decontaminating weapons and technical equipment at a place of decontamination operations; and evacuation of decontamination vehicles and equipment after operation.

Subject 20. Vehicles and Equipment for Decontaminating Clothing and Equipment

Note: Decontamination personnel (clothing and equipment) will study all lessons, and other specialists will study Lessons 1, 2, 3, 4, 5, 7, 9, and 15.

Lesson 1. Methods of decontaminating clothing and equipment.

Lesson 2. Purpose, general structure and tactical-technical characteristics of automatic decontamination vehicles for decontaminating clothing and equipment; personnel and their general duties; and care of decontamination vehicle.

Lessons 3, 4, and 5. Structure and purpose of automatic decontamination vehicle groups and regulations on their utilization.

Lesson 6. Accessories of automatic decontamination vehicle for decontaminating clothing and equipment; its characteristics; and loading procedure.

Lesson 7. Preparing to operate the automatic decontamination vehicle and decontamination duties of guards.

Lesson 8. Deployment of automatic decontamination vehicles, their evacuation and duties of guards.

Lesson 9. Setting up a decontamination station to decontaminate clothing and equipment; and the crews' duties.

Lesson 10. How to contaminated material in the automatic decontamination vehicle; starting and adjusting the decontamination vehicle; operating procedure; and method of unloading material as decontamination is completed.

Lesson 11. Operation of automatic decontamination vehicle under winter conditions; safety measures to be taken during operation, common breakdowns and their elimination.

Lesson 12. Preparing to decontaminate clothing and equipment at the decontamination station.

Lesson 13. (Final lesson) Actual work of the decontamination vehicle guards in setting up the decontamination station; deployment of automatic decontamination vehicles; their preparation for decontaminating contaminated clothing and equipment; and evacuation of automatic decontamination vehicles.

Lesson 14. Purpose, structure, and tactical-technical characteristics of washing equipment; duty personnel and their duties in general; and care of the washing equipment.

Lesson 15. Setting up the decontamination station; preoperation preparation; operation; evacuation of washing equipment; and duties of the guards.

Lesson 16. Organizing of decontamination; loading contaminated material in the washing equipment; observations on procedure; unloading; and duties of the guards.

Lesson 17. (Final lesson) Crew members' tasks in preparing the decontamination station, setting up the washing equipment, loading contaminated material, readying decontamination equipment, and actual post-operation evacuation of washing equipment.

Subject 21. Vehicles and Equipment for Decontaminating an Area

Note: Area decontamination personnel will study all lessons and other specialists will study Lessons 1, 2, 3, and 6.

Lesson 1. Area decontamination equipment and methods.

Lesson 2. Purpose, structure, and tactical-technical characteristics of motor vehicle for decontaminating an area; crew members and their general duties; and care of motor vehicle.

Lesson 3. Preparing to operate a motor vehicle; and methods of loading toxic agents in the motor vehicle.

Lesson 4. Crew members' duties during the decontamination of an area (road, route); and safety measures to be observed.

Lesson 5. Cleaning and decontamination of vehicles after operation.

Lesson 6. (Final lesson) Actual work of crew members during the preparation of a motor vehicle, loading of material, decontamination of the area; and cleaning and decontamination of mortar vehicle after operation.

Lesson 7. Method of clearing a passage in a contaminated area by removing the contaminated layer of earth (snow).

Lesson 8. Method of hand-decontamination of an area by using solid decontamination material.

Lesson 9. Method of clearing a passage in a contaminated area by removing the contaminated layer of earth, burying it, and isolating it with available material.

Subject 22. Smoke Screen Equipment and Use of Smoke Screen

Note: The chemical defense squad will study all lessons, and other specialists belonging to a chemical defense platoon (company) will study Lessons 1, 2, and 4.

Lesson 1. Smoke agents; and characteristics of the basic smoke agents.

Lesson 2. Purpose of the smoke screen, its characteristics and variety; and influence of weather and area over smoke screen equipment.

Lesson 3. Method of applying smoke agents and preventive measures to be taken when using smoke agents.

Lesson 4. Smoke generator and grenade; their purpose and structure; how to operate smoke generator and grenade; and their storage.

Lesson 5. How to lay smoke screens in erratic winds by using smoke generators and grenades.

Subject 23. Flame-Throwing and Incendiary Equipment

Lesson 1. Purpose of flame throwing equipment; and incendiary compounds, and its characteristics.

Lesson 2. Use of incendiary compounds by ground PUDAE and air force PUDAE; safety measures; and defense against incendiary compounds.

Lesson 3. Purpose, structure, and tactical-technical data on knapsack flame thrower; and regulations on flame-throwing.

Lesson 4. Purpose, structure, and tactical-technical data on fougasse flame thrower; utilization of a fougasse flame thrower during combat; method of installing a fougasse flame thrower; and its operation.

Subject 24. Model Chemical Equipment

Lesson 1. Purpose and variety of model chemical equipment; regulations on their utilization; safety measures; and storage and transportation.

Lesson 2. Purpose, makeup, and application of persistent toxic agents; and standard of consumption.

Lesson 3. Purpose, structure, packing, and use of model shell, model chemical fougasse, and small smoke generator for study purposes; standard of consumption; safety measures to be taken in working with model equipment.

Subject 25. Chemical Reconnaissance

Note: Chemical defense squads and chemical reconnaissance squads of the chemical defense platoon (company) will study all lessons and other specialists will study Lessons 1, 2, 3, 4, 9, and 10.

Lesson 1. Organization, arms, and tactics of foreign chemical KUBUNDAE.

Lesson 2. Mission and duties of chemical reconnaissance; and general reconnaissance duties of the chemical reconnaissance troops.

Lesson 3. General instructions on contaminated areas; signs of contamination; and personnel equipment, and duties of chemical patrol units assigned to reconnaissance of contaminated areas.

Lesson 4. Actions to be taken by chemical reconnaissance troops within the reconnaissance unit in the assembly area during preparation for reconnaissance, during reconnaissance in the jump-off area and after the completion of reconnaissance.

Lesson 5. Lesson 4 is reviewed at night.

Lesson 6. Actions to be taken by the chemical reconnaissance troops within the unit during chemical reconnaissance of a forest; regulations on advancing through forests; reconnaissance of wooded antitank obstacles and mountain paths.

Lesson 7. Reconnaissance of contaminated area in winter; signs of persistent toxic agents on the snow; reconnaissance methods; and selection of jump-off areas, assembly areas; and selection of camouflages.

Lesson 8. Actions to be taken by chemical reconnaissance and engineer reconnaissance personnel during reconnaissance of engineer and chemical barriers.

Lesson 9. Reconnaissance for locally available equipment which can be utilized by troops for antichemical defense; local equipment reserves and determination of its quality; and reporting on the results of reconnaissance.

Lesson 10. Chemical reconnaissance by observation; and chemical observation under various combat situations.

Lesson 11. Signs which give away the enemy's chemical attack preparations and attack.

Lesson 12. Duties of personnel and observers at the chemical observation post; setting up the observation post; observation of the enemy; and actions to taken by post personnel when the enemy starts its chemical attack as well as throughout the attack.

Lesson 13. Lesson 12 is reviewed at night.

Lesson 14. Actions to be taken by a chemical petrol during reconnaissance of a contaminated area.

Lesson 15. Chemical reconnaissance squad during march; preparation for march; duties of a squad; position of petrol unit and chemical post in the march column; operations of a chemical reconnaissance unit and chemical post in connection with reconnaissance and observation during march.

Lesson 16. Chemical reconnaissance squad during offense duties of a squad; position of the chemical patrol unit and chemical post in the combat formation of PUDAE and KUBUNDAE; observation and reconnaissance of contaminated area from the jump-off position; and marching in the combat formation of an attacking KUBUNDAE.

Lesson 17. Chemical reconnaissance squad during defense; its duties; duties of a chemical reconnaissance unit and chemical post; their position and deployment; contaminated area; reconnaissance for local equipment; observation of the enemy; and actions to be taken during the enemy's chemical attack.

Subject 26. Actions to be Taken by the Squad (Crew) When Decontaminating Weapons and Technical Equipment

For the chemical defense platoon (company)

Note: Decontamination Personnel (weapons and technical equipment) will study all lessons and other specialists will study Lessons 1, 2, and 3.

Lesson 1. Duties of crew members during the selection, planning, and establishment of a decontamination station.

Lesson 2. Crew members' action and preparation for operation of an automatic decontamination vehicle when deploying it for decontaminating weapons and technical equipment; observation work at the decontamination station; and guard and defense measures.

Lesson 3. Method of decontaminating weapons and technical equipment by using an automatic decontamination vehicle; operational statistics; and evacuation equipment after operation.

Lesson 4. (Final lesson) Selecting and setting up a decontamination station; deployment of automatic decontamination vehicles and preperation for operation; organization of operations for receiving, decontaminating, and handing-over weapons and technical equipment; statistics on operations; actions to be taken by a squad during enemy attack; and evacuation of automatic decontamination vehicles.

Lesson 5. This lesson is carried out at night on the basis of Lesson 4.

For the chemical defense squad.

Lesson 6. Selecting, planning, and establishing a decontamination station.

Lesson 7. Method of decontaminating weapons and technical equipment by receiving them at the station safety measures; statistics on operations; and defense of the station.

Lesson 8. This lesson is carried out at night on the basis of Lesson 2.

Lesson 9. Practice decontamination operations.

Subject 27. Actions to be Taken by Crew Members during Decontamination of Clothing and Equipment

Actions to be taken by automatic decontamination vehicle crew and by the washing equipment crew are studied in accordance with Subject 26.

Subject 28. Actions to be Taken by the Squad (Crew) during Decontamination of an Area

For the chemical defense platoon (company)

Note: Area decontamination troops will study all lessons and other specialists will study Lessons 1, 3, and 5.

Lesson 1. Duties of crew members during preparation of motor vehicles for decontaminating an area and during preparation for operations; and method of loading decontamination agents in vehicles.

Lesson 2. Method of moving a motor vehicle to the place of operation; and actions to be taken by crew members during the decontamination of a camouflaged area.

Lesson 3. Advancing to the decontamination motor vehicle assembly area after operations; and actions to be taken by crew members at the assembly area.

Lesson 4. (Final lesson) Preparing motor vehicle for operation; method of loading decontamination agents in a motor vehicle; advancing to the place of operation; camouflage and observation; decontamination of an area; actions to be taken by crew members during enemy attack; decontamination of motor vehicle after operation; its advance to the assembly area; and actions to be taken by crew members at the assembly area.

For the chemical defense squad

Lesson 5. Squad decontamination of an area contaminated with persistent toxic agents dusting decontamination agents; removing and burying contaminated layers of earth (snow); and isolation of the contaminated layer (snow).

Subject 29. Actions to be Taken by the Platoon during the Deployment of a Decontamination Station and Its Operations

Selection of a decontamination station and establishment of the duties of the squads; actions of the squads in setting up a decontamination station; deployment of automatic decontamination vehicles and preparations for operations; and organization and execution of the decontamination function.

Subject 30. Actions to be Taken by a Chemical Defense Platoon (Company) during Offense

Understanding the duties; determining the situation; making decisions; delivering the combat order; occupying the jump-off point for squads (platoons); actions to be taken by a platoon (company) in the combat formation of the attacking PUDAE; decontaminating roads; deploying the decontamination station; changing decontamination stations; and commanding a platoon (company).

VI. Security KUBUNDAE

Purpose -- Enlisted Men

1. To train the men on methods of establishing the command post, conducting internal security duties at the command post, and defending the command post.

2. To train the men in traffic control.

Subjects and Allocation of Time

Subject Number	Title	Hour
1	Establishment of Command Post and Its Defense	7
2	Duties of Traffic Control Personnel	4
	Participation in Command Staff Training	16
	Participation in General Arms and Services Tactical Training under Subject 22	16
	Total	43

Second Phase

Subject 1. Establishment of Command Post and Its Defense

Lesson 1. Allocation and establishment of buildings for the staff section during deployment in a residential area.

Lesson 2. Digging covered trenches and erecting tents for command post under field conditions; camouflaging the position of the staff section; digging entrenchments and foxholes, establishing of rest centers; establishing a signal post; and defending command post.

Subject 2. Duties of Traffic Control Personnel

Lesson 1. Purpose and make-up of traffic control; traffic order of transportation equipment and responsibility in traffic violations; speed and distance between vehicles; and distance markers.

Lesson 2. Control personnel's rights and duties at the fixed control point; traffic control signals; use of direction rods in traffic control; road signs; and defense of the sentry post.

VII. Training of Snipers

Note: Subjects and contents of formation training, physical training and military topography is determined by the person responsible for training.

A. Tactical Training

Purpose: To train snipers to be observant and skillful in offense as well as in defense.

Subjects and Allocation of Time

Subject Number	Title	Hour
1	Sniper-Observer	12
2	Twin-Sniper Action during Offense	12
3	Twin-Sniper Action during Defense	14
	Total	38

Subject 1. Sniper-Observer

Lesson 1. Observation when the troops are deployed and also when they are moving; selection of the observation post; its installation and camouflage; disposition of snipers; and camouflaging weapons and observation equipment.

Lesson 2. Principles and method of studying an area; observing the enemy without equipment and with equipment snipers' operating procedure during observation; and report on the results of observation.

Subject 2. Twin-Sniper Action during Offense

Lesson 1. Actions to be taken during assault preparations; understanding the duties; advancing in secrecy to jump-off position; digging-in and camouflage; study of the terrain in the direction of charge; locating targets; evaluation and indication of targets; and destruction of targets.

Lesson 2. Actions to be taken during assault and during combat in the defense in depth; advancing in the KUBUNDAE's combat formation; selection of firing position and its preparation; discovering and annihilating targets that prevent the KUBUNDAE's advance; and actions to be taken by snipers when repulsing the enemy's countercharge and when shifting into pursuit operations.

Subject 3. Twin-Sniper Action during Defense

Lesson 1. Preparing for defense; understanding the mission; selecting the observation and sniping positions; their preparation and camouflage; studying the terrain of the area of fire; and drawing up the firing plan.

Lesson 2. Action to be taken during the repulsion of enemy charge; observing the front and report on observation; selecting and evaluating targets; designating targets; destroying important targets; changing firing positions; and actions to be taken by snipers during counterattack.

B. Firing Training

1. Purpose

a. To teach snipers how to fire sniping rifles accurately at fixed targets disappearing targets, and moving targets.

b. To study the structure of the sniping rifle and observation equipment.

Subjects and Allocation of Time

Subject Number	Title	Hour
1	Sniping at Fixed Targets	36
2	Sniping at Disappearing Targets	48
3	Sniping at Moving Targets	51
	Total	135

Subject 1. Sniping Fixed Targets

Part 1. Structure of the Sniping Rifle — 7 Hours

Lesson 1. Structural characteristics of the sniping rifle; purpose, structure, and care of the telescopic sight; and structure of the follower arm.

Lesson 2. How to handle the sniping rifle, and its care.

Lesson 3. Malfunctions of the sniping rifle and telescopic sight and their effect on accuracy; and how to inspect the sniping rifle and its sight.

Lesson 4. How to adjust the sniping rifle (with telescopic sight) to fire normally.

Part 3. How to Fire the Sniping Rifle, and Firing Regulations — 24 Hours

Lesson 1. Training in sighting the sniping rifle with telescopic sight; setting the sights without the aid of instruments; and setting the sight for elevation and windage.

Lesson 2. Firing with elbow supported; preparing to fire from the prone position; how to place the butt of the rifle against the shoulder; and how to pull the trigger.

Lesson 3. Preparing to fire the sniping rifle with telescopic sight from the prone position; putting the butt of the rifle against the shoulder; and how to pull the trigger.

Lesson 4. Determining windage and elevation for ranges up to 400 meters.

Lesson 5. Ball ammunition firing.

Part 5. Observation of the Front and Range Estimation — 5 Hours

Lesson 1. Study of the terrain and landmarks of the observation area; searching for targets and determining their importance; report on disappearing targets.

Lesson 2. Range estimation within 800 meters.

Lesson 3. Searching for targets within 500 meters with telescopic sight and estimation of range.

Subject 2. Sniping at Disappearing Targets — 48 Hours

Part 1. Structure of the Sniping Rifle and Binocular — 4 Hours

Lesson 1. Purpose and structure of binoculars, and its protection and care.

Lesson 2. Purpose and structure of snooperscope, and its protection and care.

Lesson 3. How to inspect the sniping rifle in its assembled state.

Part 2. Introduction to Firing Principles of Infantry Weapons — 6 Hours

Lesson 1. (TN Fol lit.) The mask clearance of trajectory above the line of sight at distances between 200 and 600 meters; direct fire and its significance.

Lesson 2. External factors in accuracy of fire.

Lesson 3. Factors affecting the quality of fire; errors committed by infantry rifleman; condition of the weapon and its telescopic sight; and effect of wind and temperature.

Part 3. How to Fire the Sniping Rifle and Firing Regulations — 27 Hours

Lesson 1. How to fire from the kneeling, sitting, and standing positions; prepering to fire; how to place the butt of the rifle against the shoulder; and how to pull the trigger.

Lesson 2. Firing from the prone position from cover at disappearing targets; and firing regulations.

Lesson 3. Firing from the kneeling, sitting, and standing positions from cover and from a trench at disappearing targets; and firing regulations.

Lesson 4. Firing at disappearing targets which advance shifting their fire to the front and in depth; and firing regulations.

Lesson 5. Simulated firing involving selection target and determination of aiming point with due regard for windage and atmospheric conditions for distances up to 600 meters.

Lesson 6. Ball ammunition firing.

Part 4. Hand-Grenade Throwing — 3 Hours

Lesson 1. Training on the structure of hand grenade and fuze.

Lesson 2. Arming and disarming the hand grenade; preparing to throw from the standing position; how to throw far and accurately from a fixed position and also while on the move.

Part 5. Observation of the Front and Estimation of Range — 8 Hours

Lesson 1. Selecting and establishing an observation post; adjusting binoculars; observing with binocular according to the zone system; indicating targets by means of the reticle.

Lesson 2. Observing with telescopic sight and snooperscope; and indicating targets.

Lesson 3. Locating targets by tell-tale signs and other signs.

Lesson 4. Studying the area of observation; and keeping the observation log.

Subject 3. Sniping at Moving Targets — 51 Hours

Part 2. Introduction to Firing Principle of Infantry Weapons — 6 Hours

Lesson 1. Size of effective-shot area for distances up to 600 meters; and significance of the shot pattern.

Lesson 2. General remarks on effectiveness of fire; and estimating quantity of ammunition needed to destroy the target.

Lesson 3. Regulations on firing at moving targets; and determining amount of lead.

Part 3. Firing the Sniping Rifle and Firing Regulations — 32 Hours

Lesson 1. Determining amount of lead for crossing targets, and adjusting the aiming point to movement of target.

Lesson 2. Determiing the amount of lead for targets which move at an angle to the front; and moving the aiming point.

Lesson 3. Firing exercise; selecting a target; determining point of aim while considering windage; and prompt transition firing from various distances up to 600 meters.

Lesson 4. Sniping by swinging with the target.

Lesson 5. Firing by waiting for targets.

Lesson 6. Sniping at dropping parachutists, and firing regulations.

Lesson 7. Ball ammunition firing.

Part 4. Hand-Grenade Throwing — 3 Hours

Arming the hand grenade; preparing the hand grenade; throwing it from the standing position; and throwing it for and accurately from a fixed position and while on the move.

Part 5. Observation of the Front and Range Estimation — 10 Hours

Lesson 1. Selecting and establishing an observation post; study of the area for observation; and keeping the observation log.

Lesson 2. Observation on various landmarks (roads, residential areas, valleys, forests, and others).

Lesson 3. Identifying landmarks within 800 meters and range estimation.

Lesson 4. Estimating traverse angle by binocular and telescopic sight.

C. Engineer Training

Purpose: To train snipers how to camouflage and establish the snipers' post under winter conditions.

Subjects and Allocation of Time

Subject Number	Title	Hours
1	Camouflage	8
2	Establishing and Camouflaging the Snipers' Post	18
	Total	26

Subject 1. Camouflage

Lesson 1. Tell-tale that disclose troops, weapons, combat equipment, and fortifications; and how to eliminate such signs.

Lesson 2. Camouflaging positioned snipers wearing winter camouflage dress and camouflaging moving snipers.

Subject 2. Establishing and Camouflaging the Snipers' Post

Lesson 1. Establishing the sniper's post in an entrenchment.

Lesson 2. Establishing the sniper's post on the snow in the open.

Lesson 3. Installing the sniper's post at the edge of a forest and in the trees in a forest.

Lesson 4. Installing the sniper's post in a building in a residential area.

Part Two Summer Training Period

Chapter 1. Training Subjects Common to All Special Duty Soldiers

I. Political Training

Training carried out in keeping with the principles of the General Political Bureau of the Korean People's Army.

II. Regulations

A. Purpose

Observance of military regulations. Knowledge and skill in executing the duties of a soldier on duty and the guard of a company (infantry company) is taught to the one-year soldiers, and knowledge and skill in executing the duties of a company officer of the day, commander of the guard and corporal of the guard is taught to seasoned soldiers.

Subjects and Allocation of Time

Subject Number	Title	Hours		
		1st Phase	2d Phase	3d Phase
	Regulations on Discipline			
12	Military Discipline	2/2	2/-	—
	Interior Regulations			
13	Time Allocation and Daily Routine in Camp	2/2	—	—
14	Bivouac Duties	6/6	2/2	2/-
	Guard Duty Regulations			
15	Guard's Rights and Duties	4/-	8/8	—
16	Commander of the Guard's Duties	—	—	6/6
	Total	14/10	12/10	8/6

Note: The numerators indicate the time for all elements excluding the self-propelled gun KUBUNDAE and the denominators indicate the time for the self-propelled gun KUBUNDAE.

Regulations on Discipline

Subject 12. Military Discipline — The Contents are the Same as Subject 1 for Winter Training Period

Interior Regulation

Subject 13. Time Allocation and Daily Routine in Camp

Daily routine of a unit in camp reveille, morning inspection, evening inspection, study, meal, returning to the unit from training area, and reception of visitors from outside.

Internal Security Regulations, Articles 198-225 and 372-377.

Subject 14. Bivouac Duties

Lesson 1. Soldiers' internal security duties in bivouac.

Lesson 2. Day and night duties in bivouac.

Lesson 3. Duties of the company soldier on duty. Call for officer of the day to the line of bivouac. Duties during the daybreak celebration.

Supplementary training for seasoned soldiers on duties of the company officer of the day and on Articles 268-271, 273-274, 340-354, 365, 367-371 and 381 of the Internal Security Regulations.

Guard Duty Regulations

Subject 15. Guard's Right and Duties

Thorough review of knowledge obtained from Subject 10 during the winter training period concerning guard's rights and duties.

Thorough review by seasoned soldiers of knowledge obtained during the winter training period concerning the rights and duties of the commanders of the guard and corporal of the guard in addition to the above-mentioned matters.

Guard Duty Regulations, Articles 63-92, 134, 140, 158-164, 165-183 and 243.

Subject 16. Commander of the Guard's Duties

Duties and responsibilities of the Commander of the guard. Action of personnel on the relieving detail on their way to the relief. Posting of the relief.

Guard Duty Regulations, Articles 158-164.

III. Formation Training

A. Purpose

1. To have the KUBUNDAE perfect line formation, extended formation and motor march formation.

2. To familiarize the officers and noncommissioned officers in the command of a KUBUNDAE in line formation and extended formation.

3. To perfect the standard appearances of the soldiers.

B. Systematic Instructions

The basic task is to train the KUBUNDAE for coordinated action in line formation, while in movement by motor vehicles and in extended formation during the summer training period. Studies to perfect KUBUNDAE

formation is carried out in the field, and basically is conducted before studying the corresponding subjects on tactical training. At the end of each phase, formation inspection is carried out as follows:

1. Company -- by battalion commander
2. Battalion -- by regimental commander
3. Regiment -- by division commander

During formation inspection, the following are checked: Balanced arrangement of the formation of the KUBUNDAE entrucking and detrucking; command ability of officers and noncommissioned officers; and handling of subordinates by the officers and noncommissioned officers.

Subjects and Allocation of Time

Subject number	Titles of subjects	KUBUNDAE																					
		Infantry KUBUNDAE, machine gun KUBUNDAE, antiaircraft machine gun KUBUNDAE, and grenade launcher KUBUNDAE			Reconnaissance KUBUNDAE			Battalion gun and mortar KUBUNDAE			Regimental gun and mortar KUBUNDAE			Self-propelled gun KUBUNDAE			Battalion communication KUBUNDAE			Regimental communication KUBUNDAE, engineer KUBUNDAE, chemical defense KUBUNDAE			Internal security KUBUNDAE		
		Phase																					
		1	2	3	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3
9	Squad formation	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	5	—	—	5	—	—	5	5	—
10	Platoon formation	8	—	—	8	—	—	10/4*	2	—	4	4	—	5	—	—	5	2	—	5	4	—	5	5	—
11	Company (Battery) Formation	12	—	—	12	8	6	-/6	—	—	6	6	6	—	4	—	—	—	—	—	6	—	—	—	—
	Battalion Formation	—	8	6	—	—	—	—	8	6	—	—	—	—	—	—	—	8	**	—	—	—	—	—	—
	Regimental Formation Insepction	—	—	4	—	—	4	—	—	4	—	—	4	—	—	4	—	—	4	—	—	4	—	—	4
	Total	20	8	10	20	8	10	10	10	10	10	10	10	5	4	4	10	10	4	10	10	4	10	10	4

* The numerators indicate the time for the battalion artillery, and the denominators are the time for the battalion mortar.

** For Subject 12, six hours will be allocated from the third phase special training during the summer training period.

Remarks: The antiaircraft machine gun KUBUNDAE, chemical defense KUBUNDAE and heavy grenade launcher KUBUNDAE shall utilize the time allocated for Subject 11 in the study of Subjects 9 and 10.

Subject 9. Squad Formations

Lesson 1. Single-rank and double-rank line formations. Close and open formation at a halt and while marching. Changing the direction of the formation by flank movements. Changing the marching direction. Forming a double-rank line formation from a single-rank line formation and a single-rank line formation from a double-rank line formation.

Lesson 2. Changing from deployed formation to marching formation and from marching formation to deployed formation. Changing from single-file column to column of twos and from column of twos to single-file column. Changing the marching direction of a columns. Saluting in formation at a halt and while marching. Squad answer to the commanding officer's greeting.

Formation Regulations, Articles 91-105 and 109-118.

Subject 10. Platoon Formations

Infantry KUBUNDAE, Engineer KUBUNDAE, signal KUBUNDAE, Chemical Defense KUBUNDAE and Internal Security KUBUNDAE:

Lesson 1. Platoon alinement in deployed formation. Dressing and facing at a halt. Forming a platoon in column and re-forming while marching. Saluting in formation at a halt and while marching.

Lesson 2. Changing from deployed formation to marching formation (column) and from marching formation to deployed formation. Forming a column of threes (fours) from a column of twos or a file, and a file or column of twos from a column of threes (fours).

Lesson 3. Extended formations of the platoon (wedge, reverse-wedge). Extending a platoon in a column. Changing the marching direction of a platoon. Assembling of a platoon. Forming a skirmish line from a platoon in column. Advancing to attack.

Formation Regulations, Articles 127-168.

Reconnaissance Element:

Lessons 1, 2 (dismounted formations). The contents and the same as Lessons 1 and 2 for the infantry KUBUNDAE.

Lesson 3. Assembling and alinement of a platoon for a motar march, Entrucking; Changing from deployed formation to marching formation, from marching formation to dispersed formation and from dispersed formation to marching formation. Motar march and the command of motor vehicles during march. Detrucking and preparation for combat.

Formation Regulations, Articles 127-156.

Machinegun KUBUNDAE, Antiaircraft Machinegun KUBUNDAE, Grenade Launcher KUBUNDAE and Battalion Mortar KUBUNDAE:

Lesson 1, 2 (without weapon). The contents are the same as Lessons 1 and 2 for the infantry KUBUNDAE.

Lesson 3. Alinement in deployed formation with machineguns (grenade launchers, mortars). Changing of formation from deployed formation to marching formation and from marching formation to deployed formation. Extending the platoon in column. Advancing deployed formation.

Formation Regulations, Articles 212-222 and 245-251.

Artillery KUBUNDAE and Regimental Mortar KUBUNDAE:

Lesson 1 and 2 (without weapon). The contents are the same as Lessons 1 and 2 for the infantry KUBUNDAE.

Lesson 3. Deployed formation of a platoon equipped with guns (mortars). Changing from deployed formation to marching formation. Dispersion during march. Changing of formation to a marching column.

Articles 127-156 of the Regulations on Formation.

Artillery Manual, Articles 7-27 on formation, and fire mission.

Self-Propelled gun KUBUNDAE:

Lesson 1 and 2 (dismounted formation). The contents are the same as Lessons 1 and 2 for the infantry KUBUNDAE.

Lesson 3. Movements for a motor march, that is alinement, entrucking and detrucking. Assembly by signals.

Formation Regulations, Articles 127-156.

Subject 11. Company (Battery) Formation

Infantry KUBUNDAE:

Lesson 1. Alinement in deployed formation, that is double-rank line formation and column of platoon in line. Dispersion of a company and forming a column of fours from a double-rank line formation. Saluting in formation at a halt and while marching.

Lesson 2. Changing from deployed formation to marching formation and from marching formation to deployed formation. Forming a company in column of platoons in line at the halt. Column marching of a company. Actions on encountering unexpected enemy ground or an attack.

Lesson 3. Forming a skirmish line from a company in column. Advance and assault of the skirmish line.

Lesson 4. Method of allocating personnel and equipment by motor vehicles. Method of alining the KUBUNDAE beside the motor vehicles before entrucking. Method of arranging personnel on the motor vehicle as well as loading of equipment on the vehicle. Movement of motor vehicles in column. Changing from column to parallel line formation and from parallel line formation to column. Turning of a column. Halting of a vehicle and detrucking of personnel.

Formation Regulations, Articles 169-193 and 273-297.

Reconnaissance KUBUNDAE:

Lesson 1 and 2 (dismounted formation). The contents are the same as Lessons 1 and 2 for the infantry KUBUNDAE.

Lesson 3. Assembly and alinement of a company beside armored transport vehicles. Changing from deployed formation to marching formation, from marching formation to dispersed formation and from dispersed formation to marching formation. Actions when encountering unexpected enemy ground

or air attack. Command signal, its reception, relay and execution. Halting, detrucking, and preparation for combat. Disposition of armored transport vehicles in a covered area.

Formation Regulations, Articles 169-179 and 184-185.

Machinegun KUBUNDAE and Battalion Mortar KUBUNDAE:

Lessons 1 and 2 (without weapon). The contents are the same as Lessons 1 and 2 for the infantry KUBUNDAE.

Lesson 3. Alinement in deployed formation with machineguns (mortar, grenade launcher). Changing from deployed formation to marching formation and from marching formation to deployed formation. Extending a company in single-line (wedge, reverse wedge). Advance in deployed formation.

Formation Regulations, Articles 169-179, 184-185, 225-233, and 255-256.

Regimental and Battalion Mortar KUBUNDAE:

Lesson 1 and 2 (without weapon). The contents are the same as Lessons 1 and 2 for the infantry KUBUNDAE.

Lesson 3. Deployed formation of an artillery battery. Changing from deployed formation to marching formation. Deployment while marching. Re-forming to marching column after deployment.

Formation Regulations, Articles 169-179 and 184-185.

Artillery Manual, Articles 7-27 on formation and fire mission.

Self-Propelled Gun KUBUNDAE:

Lesson 1 and 2 (dismounted formation). The contents are the same as those of Lessons 1 and 2 for the infantry KUBUNDAE.

Lesson 3. Alinement of personnel beside the self-propelled gun; entrucking and detrucking. Changing the formation of an artillery battery from deployed formation (artillery battery disposed in one line) to marching formation, from marching formation to dispersed formation (platoon column dispersed in one line) and from dispersed formation to marching formation. Alinement in combat formation, "line formation."

Formation Regulations, Articles 169-179 and 184-188.

Engineer KUBUNDAE and Communication KUBUNDAE:

Lesson 1 and 2. The contents are the same as those of Lessons 1 and 2 for the infantry KUBUNDAE.

Formation Regulations, Articles 169-179 and 184-185.

Subject 12. Battalion Formation

Lesson 1. Extended formations; that is double-rank line formation, in line of platoons in column, and in line of companies in column. Changing from deployed formation to marching formation and from marching formation to deployed formation. Advancing in a march column. Actions on encountering sudden enemy ground or air attacks.

Lesson 2. Extended formation of a battalion (wedge, reverse-wedge). Saluting in formation at halt and while marching.

Lesson 3. Advance of a battalion to the entrucking point. Alinement of a battalion before entrucking. Loading plan. Motor movement by column. Actions during enemy attack. Halting of a vehicle and detrucking of personnel and equipment. Deployment for combat. Movement of motor transports behind the battalion combat formation.

Formation Regulations, Articles 257-267 and 273-279.

IV. Physical Training

A. Purpose: To train soldiers in swimming methods. To train the soldiers is becoming proficient in fighting with the carbine and in overcoming obstacles.

Subjects and Allocation of Time

Subject Number	Title	For all KUBUNDAE excluding artillery KUBUNDAE, mortar KUBUNDAE self-propelled gun KUBUNDAE, engineer KUBUNDAE, communication KUBUNDAE, chemical defense KUBUNDAE and security KUBUNDAE			For artillery KUBUNDAE, mortar KUBUNDAE, self-propelled gun KUBUNDAE, engineer KUBUNDAE, communication KUBUNDAE, chemical defense KUBUNDAE and security KUBUNDAE		
		Phase and Hours					
		1	2	3	1	2	3
5	Gymnastics	11	3	5	6	-	5
6	Close Combat and Obstacle Course Running	4	3	3	-	-	-
7	Swimming	4	8	4	4	6	3
	Total	19	14	12	10	6	8

Subject 5. Gymnastics

Second and third phases combined.

Lesson 1. For one-year soldiers. Horizontal bar: pullups while bending and raising the knees to the chest. Parallel bars: bending and straightening the elbows. Horse: side horse vaulting with legs spread apart. Balancing log (height 130-150 centimeters): crossing at normal pace.

For veteran soldiers. Horizontal bar: lifting body on bar by standing the elbows. Parellel bars: headstand with shoulders resting on the bars. Horse: long horse vaulting with legs spread apart. Balancing log (height 130-150 centimeters): crossing by alternately walking and halting.

Lesson 2. For one-year soldiers. Horizontal bar: pullups while bending and raising the knees to the chest. Rope (pole) climbing: climbing using only by hands. Horse: side horse vaulting with the legs spread apart. Weight carrying race: carrying a person on one's back. Acrobatics: holding the rings and flipping backwards. Games: "Scaling the wall."

For veteran soldiers. Horizontal bar: lifting body on bar by standing the elbows. Rope climbing: "three-stage rope climbing." Horse (height 110-115 centimeters): long horse vaulting with legs spread apart. Weight carrying race: carrying a person on one's back. Acrobatics: headstand with shoulders upheld by a person lying on the ground. Games: "Scaling the wall."

Lesson 3. For one-year soldiers. Horizontal bar: lifting the body over the bar from under and around it. Parallel bars: bending and straightening the elbows between the parallel bars. Jumping up and grabbing the rope and keeping one's body suspended by winding the rope around the body. Balancing log (height 130-150 centimeters): crossing at normal pace.

For veteran soldiers. Horizontal bar: lifting body on bar by standing the elbows. Parallel bars: headstand with shoulders resting on the bar. Climbing exercise: climbing an inclined rope by alternate hooking of the legs. Balancing log (height 130-150 centimeters): crossing by alternately walking and halting.

Lesson 4. For one-year soldiers. Horizontal bar: lifting the body over the bar from under and around it. Parallel bars: mounting the bars from the back by swinging the body between the bars. Rope climbing: standing by holding the rope and winding it around the body. Horse: side horse vaulting with the legs spread apart.

For veteran soldiers. Horizontal bar: lifting body on bar by standing the elbows. Parallel bars: landing on one side after swinging the body between the bars. Climbing exercise: climbing an inclined rope by using the hands and alternate hooking of the legs. Horse (height 115-120 centimeters): ——

(TN Page 292 is missing and page 392 appears in its place.)

--- facing front. Parallel bars: swinging at end of bars and landing forward. Climbing exercise: pole climbing. Acrobatics: maintaining the body horizontally by supporting the body with the elbows.

For veteran soldiers. Horizontal bar: lifting the body over the bar by grasping the back of the knees with the back of the hands. Parallel bars: lifting the body by holding the ends of the bars. Climbing exercise: climbing a wall with the aid of a rope. Acrobatics: maintaining the body horizontally by supporting the body with the elbows.

Lesson 9. For one-year soldiers. Horizontal bar: getting on the bar and spinning forward. Parallel bars: swinging the body between the bars and landing forward with legs spread apart. Horse: (height 125 centimeters): side horse vaulting with the legs spread apart. Acrobatics: hanging exercise — raising the body by standing the elbows.

For veteran soldiers. Horizontal bar: lifting the body over the bar by hooking the bar with the back of the knees with the hands between the knees. Parallel bars: lifting the body by grasping the ends of the bars. Horse (height 120 centimeters): vaulting exercise — vaulting over horse from either the left or right side with one hand. Acrobatics: holding the rings and flipping forward.

Lesson 10. For one-year soldiers. Horizontal bar: getting on the bar and spinning forward. Climbing exercise: pole climbing. Horse (height 125 centimeters): side horse vaulting with the legs spread apart. Balancing: (height 130-150 centimeters): balancing exercises — walking backwards. Acrobatics: raising the body by standing the elbows.

For veteran soldiers. Horizontal bar: lifting the body by hooking the back of the knees on the bar with the hands between the knees. Climbing exercise: climbing a wall with the aid of a rope. Horse (height 120 centimeters): running vault over the horse from either the left or the right side with one hand. Balancing log (height 130-150 entimeters): running across.

Reference book: Physical Training Manual.

Subject 6. Close Combat and Obstacle Course Running

Lesson 1. Perfection of technique for man-to-man combat with the use of carbines with padded muzzles, and of technique for throwing hand grenades at targets of predetermined ranges. Coordinated action with the use of carbines with padded muzzles. Butt strokes with the carbine. The 1,000-meter run.

Composite Lessons

Lesson 2. Running the 200-meter obstacle course combined with the throwing of hand grenades at targets and the use of carbines for bayoneting and butt stroking the dummies. Running for 50-100 meters while overcoming two to three obstacles with carbines with padded muzzles and throwing hand grenades into the trench. Close combat with the remaining enemies who are near and inside the trench (entrenchment). Running for 1,500 meters.

Lesson 3. Hand grenade throwing. Running the 200-meter obstacle course with bayonet and butt stroke actions. Rapidly running the 200-meter obstacle course (with good results).

Lesson 4. Rapidly running the 200-meter obstacle course. Coordinated actions with carbines whose muzzles are padded. Running for 50-100 meters and overcoming two to three obstacles while throwing hand grenades into a trench (entrenchment) from a distance of 25 to 30 meters. Coordinated action in the front of and within a trench (entrenchment). Penetrating the defense in depth. Hand grenade throwing. Jumping into the antitank ditch and annihilating the group of dummies with bayonet and thrusts and butt strokes. Method of crawling out of the antitank ditch with the aid of a comrade passing by.

Subject 7. Swimming

Lesson 1. Demonstration of swimming methods. Screening combat personnel who cannot swim from those who can swim, and organizing them into different groups.

Lesson 2. For non-swimmers: Preparatory practice on the river bank and in the water for swimming free style without pulling the hands out of the water.

For swimmers: Practice for swimming side stroke without pulling the hands out of the water. Review of previously learned swimming methods.

Lesson 3. For non-swimmers: Preparatory practice on the river bank and in the water for swimming free style without pulling the hands out of the water.

For swimmers: Side stroke and review of swimming methods already learned.

Lesson 4. For beginners: Swimming free style without pulling the arms out of the water. 50-100 meter swimming with the use of training equipment (tire).

For swimmers: Practice for side stroke. Starting and turning by the methods already learned.

Lesson 5. For beginners: Swimming with the aid of training equipment and swimming free style without pulling the arms out of the water.

For swimmers: Jumping into the water feet down. Perfecting the side stroke.

Lesson 6. For beginners: Free style swimming for 100 meters with the aid of training equipment (log, tire).

For swimmers: Preparation for river crossing with army uniform and equipment. Crossing the river with a pack on the back.

Lesson 7. For beginners: Free style swimming for 100-150 meters with the aid of training equipment (log, tire).

For swimmers: Diving into the water head first. Practicing swimming methods already learned.

Lesson 8. For non-swimmers: Perfection of free style swimming.

For swimmers: Method of swimming for 100 meters with army uniform on. Methods of approaching a drowning man, keeping his head above water, and towing him to safety.

Lesson 9. For beginners: Perfection of free style swimming.

For swimmers: Rescue of drowning persons. Practice for crossing a river with a pack on the back, or by pushing it or pulling it with a rope.

Reference book: Physical Training Manual.

V. Engineer Training

A. Purpose

For one-year soldiers: To train the soldiers in the disposal of mines and other explosives, in locating fords and in river-crossing operations.

For veteran soldiers: To familiarize the soldiers in the technique of overcoming obstacles and in carrying out river crossings.

B. Systematic Instructions

Instructions on explosives will be conducted in groups smaller than a platoon under the leadership of officers. Safety measures must be observed at all times. Instructions on mines and other explosives as well as the detection and neutralization of mines will be carried out with the aid of mines for training purpose. Training in fording

operations with available materials and standard equipment as well as river crossing by swimming will be conducted in predesignated training area. Training will be conducted by the KUBUNDAE at the river (lake) for one day and night. Day and night river-crossing operations will be carried out.

Subjects and Allocation of Time

Subject Number	Title	For all KUBUNDAE excluding communication KUBUNDAE, chemical defense KUBUNDAE and security KUBUNDAE	For communication KUBUNDAE, chemical defense KUBUNDAE and security KUBUNDAE
		Hours	
	First Phase		
11	Explosives	2	-
12	Mines	6	-
	Total	8	-
	Second Phase		
13	River-Crossing (River or Lake) for One Day and Night	8	8
	Total	8	8
	Grand Total	16	16

First Phase

Subject 11. Explosives

Same as Subject 5 of winter training period.

Subject 12. Mines

Same as Lessons 1 to 4 of Subject 6 of winter training period.

Subject 13. River-Crossing (River or Lake) for One Day and Night

Reconnaissance of a ford, installation and crossing of a ford. Crossing the river by swimming with the aid of available materials. Construction of rafts. Ferrying troops and combat technical equipment across the river on rafts. River-crossing by ground combat unit and of combat technical equipment with standard river-crossing equipment.

VI. Anti-Chemical Training

A. Purpose: To train the soldiers in the methods of overcoming a contaminated area and of decontaminating personnel, weapon, combat technical equipment and area.

Subjects and Allocation of Time

Subject Number	Title	Hours
	First Phase	
13	Decontamination of Personnel, Clothing, Area, Weapon and Combat Technical Equipment	3
14	Smoke Pot and Smoke Screen Hand Grenade	1
	Total	4
	Second Phase	
15	Overcoming of a Gas Contaminated Area	3
16	Anti-Chemical Defense Equipment for a Group	1
	Total	4
	Grand Total	8

First Phase

Subject 13. Decontamination of Personnel, Clothing, Area, Weapon and Combat Technical Equipment

Lesson 1. Purpose and structure of the decontamination kit for individual use and regulations on its use. Decontamination of personnel and clothing with the use of this kit.

Lesson 2. Structure of a carbine and mortar decontaminating apparatus and artillery decontaminating apparatus as well as regulations on their utilization. Primary decontamination and complete decontamination of weapon and combat technical equipment as well as their cleaning and lubrication after decontamination. Training on methods of removing contaminated layer of soil or of isolating it from ordinary soil.

Subject 14. Smoke Pot and Smoke Screen Hand Grenade

Purpose and structure of a smoke pot and a smoke screen hand grenade. Method of usage. Purpose and types of smoke screen. Methods of laying smoke screen with smoke pot and smoke screen hand grenades in varying wind directions.

Second Phase

Subject 15. Overcoming of a Gas Contaminated Area

Reconnaissance of contaminated areas and system for marking of contaminated areas. Decontamination preparations. Procedures to take in putting on protective equipment. Neutralization of a contaminated area. Advance into a contaminated area. Entrenchment and conducting of fire. Procedures for taking off gas masks and protective clothing. Decontamination of personnel and primary decontamination of weapon.

For veteran soldiers: Patrol unit leader's duties during reconnaissance and during the marking of contaminated areas will be additionally taught.

Subject 16. Anti-Chemical Defense Equipment for a Group

Purpose and structure of protective shelters against chemical agents. Regulations on the utilization of protective shelters. Order in a shelter. Duties of the soldier on duty in a shelter.

For veteran soldiers: Duties of the officer on duty in a shelter will be additionally taught.

VII. Military Topography

A. Objectives Purpose of Study: To familiarize the soldier in making a correct report by determining the azimuth with or without the use of maps in the field (especially at night) and in determining one's position and the location of the surface object to be observed.

For reconnaissance troops: Methods on how to mark the results of observation and reconnaissance of the enemy and area on the map (or sketch) will be additionally taught.

B. Systematic Instructions

Determination of direction, map exercise and march according to given azimuth in an unfamiliar area.

Advance according to a given azimuth by a team consisting of 3 to 5 persons led by will trained veteran soldiers.

Subjects and Allocation of Time

Subject Number	Title	For all KUBUNDAE and specialists excluding the patrols belonging to the reconnaissance KUBUNDAE, self-propelled gun KUBUNDAE, and artillery and mortar KUBUNDAE	For reconnaissance KUBUNDAE	For patrols belonging to the artillery and mortar KUBUNDAE	For self-propelled gun KUBUNDAE
		Hours			
	First Phase				
6	Determination of Direction in the Field and Map Exercise	4	4	12	2
7	Night March According to Given Azimuth	4	6	12	4
8	Preparation of Combat Documents in Chart and Table Forms	-	5	8	-
	Total	8	15	32	6

Subjects and Allocation of Time (Cont'd)

Subject Number	Title	For all KUBUNDAE and Specialists excluding the patrols belonging to the reconnaissance KUBUNDAE, self-propelled gun KUBUNDAE, and artillery and mortar KUBUNDAE	For reconnaissance KUBUNDAE	For patrols belonging to the artillery and mortar KUBUNDAE	For self-propelled gun KUBUNDAE
		Hours			
	Second Phase				
8	Preparation of Combat Documents in Chart and Table Forms	-	-	4	7
9	Grid Coordinate System	-	-	6	2
10	Preparation of Route Sketch	-	-	8	-
	Total	-	-	18	9
	Grand Total	8	15	50	15

First Phase

Subject 6. Determination of Direction in the Field and Map Exercise

Lesson 1. Preparations of maps for field exercises and care of maps during field exercises. Orienting the map by using terrain features, directional objects and the compass. Determination of one's own location on a map by various methods. Reading of maps as well as locating the landmarks and terrain features indicated on the map. Locating on the map the landmarks observed in the field. Reporting one's own location and the locations of observed targets.

Lesson 2. Marching along and off the roads in daytime according to a map (or sketch) and reporting all situations observed on the way. Marking observed targets on the map (or sketch).

Lesson 3. (For patrols of artillery KUBUNDAE and mortar KUBUNDAE only) Locating directional objects targets and observed targets, and marking them down on the map (or sketch). Marking concealed approaches and areas not covered from an observation post on the map (or sketch).

Subject 7. Night March According to Given Azimuth

Lesson 1. Preparation of the compass for night operations. Determining the azimuth and ascertaining the direction while marching with the aid of the

compass, the moon and the North Star. The selection and use of directional objects during a road march at night. Installation and use of artificial directional objects. Bypassing obstacles and maintaining the original direction of march. March according to given azimuth.

Lesson 2. (For reconnaissance KUBUNDAE only) Night march in close terrain according to given azimuth. Bypassing obstacles.

Lesson 3. Locating roads leading to a given point at night with the help of celestial features.

Second Phase

Subject 8. Preparations of Combat Documents in Chart and Table Forms

Lesson 1. Uses and contents of sketches. Route sketch for marching according to given azimuth. Sketch showing directional objects. Sketch showing targets. Sketch showing march route. (For the self-propelled gun KUBUNDAE, the firing table and the diagram of a tank) Preparation and regulations on various types of sketches. Military signs and symbols used in sketches and plans.

Lesson 2. Preparing sketches for reports (only for soldiers belonging to the reconnaissance KUBUNDAE). Preparing the firing table and the diagram of a tank (for the self-propelled gun company only).

Lesson 3. (For patrols of the artillery and mortar KUBUNDAE only) Preparing sketches from maps to the same scale.

Lesson 4. (For patrols of the artillery and mortar KUBUNDAE only) Preparing sketches from maps to different scales (from 1:5,000 to 1:10,000).

Lesson 5. (For patrols of the artillery and mortar KUBUNDAE only) — 4 hours. Marking of directional objects (a rough sketch of the target).

Subject 9. Grid Coordinate System

Lesson 1. Orientation on grid coordinate system. Its purpose and indication in values (digits). Determining the approximate coordinates or pinpointing the exact coordinates on a map (or plotting board). Entering points on a map (plotting board). Indication of targets by grid coordinate system.

Lesson 2. (For patrols of the artillery and mortar KUBUNDAE only) Measuring the traverse on a map (plotting board) with a protractor and the goniometer. Plotting the traverse on a map (plotting board) with the goniometer.

Subject 10. Preparation of Route Sketch

Lesson 1. Sequence and procedure in preparing a route sketch. Preparation plotting board. Establishment of route (time). Preparing sketch from a map. Marking of landmarks and terrain features on the sketch.

Lesson 2. (6 hours) Practice in preparing route sketch.

VIII. Signal Communication Training

A. Purpose

For reconnaissance KUBUNDAE: To train the soldiers in the operation of a telephone set. To familiarize the soldiers with communication lines and methods of destroying enemy communication lines.

For patrols of the artillery and mortar KUBUNDAE: To train the soldiers in the transmitting of messages by radio telephone, and in the installing of insulated telephone lines for short distances.

For crews of the self-propelled gun KUBUNDAE: To perfect their skill in radio operation.

Subjects and Allocation of Time

Subject Number	Title	For the reconnaissance KUBUNDAE	For patrols belonging to the artillery and mortar KUBUNDAE	For self-propelled gun elements in accordance with their speciality								
				Self-propelled gun commanding officers			Artillery commanders and loaders			Drivers		
		Phases and Hours										
		2	1	1	2	3	1	2	3	1	2	3
13	Field Telephone Set and Operational Rules	3	–									
14	Telephone Line Training	3	–									
15	Methods of Destroying Enemy Communication Lines	4	–									
16	Wiring of Short Insulated Telephone Lines	–	8									
17	General Structure of an Ultra-Short Wave Radio Set and Operational Rules	–	4									
18	Radio Telephone Operation	–	6									
19	Radio Communication in a Platoon Net	–	–	8	–	–	6	–	–	4	–	–
20	Radio Communication in an Artillery Battery Net	–	–	2	6	–	4	–	–	2	2	–
21	Radio Communication in the Joint Action Net between the Infantry and Artillery	–	–	–	2	6	–	6	–	–	2	–
	Total	10	18	10	8	6	10	6	–	6	4	

Subjects 13, 14 and 15. Same as Subjects 4, 5 and 6 for winter training period.

Subject 16. Wiring of Short Insulated Telephone Lines

Lesson 1. Structure of insulated line and telephone coil. Tools to be used in wiring insulated telephone lines. Regulations on the winding and unwinding of insulated telephone lines. Splicing of insulated telephone lines.

Lesson 2. Stringing of short insulated telephone lines along the ground in an open area and also overhead. Tieing of insulated lines under various conditions.

Lesson 3. Stringing of insulated lines in isolated areas and in forests. Knowledge about mud roads, national highways and railroad crossings.

Subject 17. General Structure of an Ultra-Short Wave Radio Set and Operational Rules

Same as Subject 7 for the winter training period.

Subject 18. Radio Telephone Operation

Same as Subject 3 for the winter training period.

Subjects 19 and 20. Same as Subjects 11 and 12 for the winter training period.

Subject 21. Radio Communication in the Joint Action Net between the Infantry and Artillery

Lesson 1. Conducting of operations via the joint action net by using the radio signal chart and MILMA* map. Transmission of signal for commencing fire, signal for transfer of fire and signal for suspension of fire. Indiction of targets for the infantry and artillery.

Lesson 2. Participation in the infantry and artillery radio net as well as transmission of signals. Utilization of transmitted data of other nets. Conduct operations at full capacity of the main radio set of the net.

IX. Knowledge of Technical Equipment

A. Purpose: To teach the soldiers the basic tactical and technical data, mission and combat performance of the tanks and self-propelled guns.

First Phase

Subject 2. Tanks and Self-Propelled Gun — 4 hours.

Mission, tactical and technical data of tanks and self-propelled guns. Basis for use in combat and performance in combat. Demonstration of tank (self-propelled gun) fire, combat methods of the tanks (self-propelled guns) during performance of various duties and in the overcoming of barriers. Coordinated actions of the infantry, tanks, and self-propelled guns.

X. Sanitation Training

A. Purpose: To train the soldiers in practical methods of administering self-treatment and mutual treatment as well as methods of evacuating wounded soldiers from the front.

Subject and Allocation of Time

Subject Number	Title	Hours
	First Phase	
7	Evacuation of Wounded Soldiers from the Front	2
8	Self-Treatment and Mutual Treatment when Wounded in Combat or in an Accident	2
	Total	4

First Phase

Subject 7. Evacuation of Wounded Soldiers from the Front

Skilful utilization of terrain and camouflages. Practice in approaching wounded soldiers in the field and in evacuating wounded soldiers to the nearest shelter.

Subject 8. Self-Treatment and Mutual Treatment when Wounded in Combat or in an Accident

Lesson 1. General knowledge on injuries and first-aid bandages. Positions (standing—sitting—lying) to take when suffering from an injury on the head, body or limbs. Training in bandaging with the use of the first-aid packet.

Lesson 2. Practice in application of tourniquet with the aid of a string, leather belt or bandage and practice in placing splints made of available materials. Elementary knowledge of shock and its treatment. Administering of first aid in an accident.

Chapter 2. Tactical Training

Purpose:

1. To train a company (battery) for general combat.

2. To perfect individual, squad (component, crew) and platoon training.

Systematic Instructions:

1. During summer training period, emphasis will be placed on the conducting of joint tactical maneuvers.

2. As a rule, training in combat formations will be conducted prior to conducting tactical exercise. The tactical exercise will be organized and conducted by the commanding officer of the KUBUNDAE undergoing training. (Platoon commander will direct the squads, and company commander the platoons.)

As a rule, tactical maneuver utilizing combat fire will be carried out under the order of the commanding officer of an echelon two levels above the KUBUNDAE undergoing training. (The squads will be directed by the company commander and the platoons will be directed by the battalion commander.)

Under certain circumstances, the commanding officer of the KUBUNDAE undergoing training may conduct the tactical maneuver utilizing combat fire.

3. As a rule, tactical maneuver by a company is conducted for one day and night or longer under conditions almost similar to combat conditions. The tactical maneuver will be conducted so as to create situations which demand continuous development of actions strictly conforming to the objectives of study in accordance with the subject and its contents.

To further enhance the training results, each tactical maneuver will be carefully organized and coordinated with the utilization of technical equipment, and the maneuver will be conducted in a terrain which is not familiar to the KUBUNDAE.

The officers giving the critique on the maneuver will be selected from among careful and prudent officers who possess tactical insight and knowledge about the conducting of combat.

In briefing the officers who are to give the critique, an actual reconnaissance of the maneuver area will be conducted with the commanding officer and the maneuver plans discussed.

In planning the maneuver, the period for preparation should extend three to five days and nights according to the contents of the subject and the scale of the maneuver.

4. Briefing of the commanding officers must be carried out prior to the tactical maneuver. During the briefing, special attention must be given to combat formations, command of the KUBUNDAE, and to problems concerning coordination of actions with reinforcing weapons and adjacent units.

5. During the tactical maneuver, practice in riding a tank will be conducted by all KUBUNDAE.

I. Infantry KUBUNDAE

Subjects and Allocation of Time

Subject Number	Title	Hours
	First Phase	
23	Platoon in Defense	6
24	Assault of Reinforced Infantry Company against Enemy in Defence	16
25	Reinforced Infantry Company in Defence	16

Subjects and Allocation of Time (Cont'd)

Subject Number	Title	Hours
26	Tactical Maneuver Combined with Combat Fire in Subject Titled "Assault of Reinforced Infantry Company against Enemy in Defense"	8
	Total	46
	Second Phase	
27 and 28	General Arms Tactical Maneuver	60
	Total	60
	Third Phase	
29, 30 and 31	General Arms Tactics	84
	Total	84
	Grand Total	190

First Phase

Subject 23. Platoon in Defense (Tactical maneuver)

The contents are the same as Lesson 1 of Subject 16 for the winter training period.

Subject 24. Assault of Reinforced Infantry Company against Enemy in Defense

Lesson 1. (Tactical exercise) Organization of the attack and the assault: Occupying and strengthening the assault position. Overcoming obstacles. Advancing for assault. The company's combat formation and coordination of actions with reinforcing weapons.

Lesson 2. (Tactical exercise) Actions of the company within the enemy's defense in depth: Mobility of the combat formation in moving to the enemy's flanks and rear. Assault of the strong points within the enemy's defense in depth. Repelling the enemy's counterattack.

Lesson 3. (Day-and-night tactical maneuver) Assault of reinforced infantry company against the enemy in defense: On-the-spot reconnaissance and the decision. Issuing combat orders. Organizing coordinated actions. Occupying the assault position. The assault. Overcoming obstacles. Mobility of the combat formation in moving to the enemy's flanks and rear with the objective of assaulting the strong points within the enemy's defense in depth. Coordination of actions with adjacent units and reinforcing weapons. Repelling the enemy's counterattack. Pursuing of the enemy.

Subject 25. Reinforced Infantry Company in Defense (Tactical maneuver lasting two days and two nights)

On-the-spot reconnaissance and the decision. Issuing combat orders. Organizing fire power, coordination of actions and defensive measures.

Setting up the defense area and strong points. Anti-aircraft and anti-chemical defense measures. Constant maintenance of combat preparedness. Repelling enemy tank and infantry assault. Annihilating with fire power and counterattack the enemy penetrating into the defense position.

Subject 26. Tactical Maneuver Combined with Combat Fire in Subject Titled "Assault of Reinforced Infantry Company against Enemy in Defense"

Understanding the mission. Estimating the situation. Making a decision. Issuing combat orders. Organizing coordinated actions. The assault. Command of the company and reinforced weapons in the assault and in combat within the enemy defense in depth. Coordinated actions with the reinforced KUBUNDAE and adjacent troops. Repelling enemy counterattack.

II. Reconnaissance KUBUNDAE

Subjects and Allocation of Time

Subject Number	Title	Phase and Hours		
		1	2	3
18	Platoon on Reconnaissance	19	6	-
19	Postmarch Assault of Reinforced Company against Enemy Hastily Switching to Defense			
20	Roinforced Company in Defense	12	-	-
21	Company in Reconnaissance		44	
	Participation in General Arms Tactical Maneuver in Subjects 29, 30 and 31	-	-	84
	Total	39	50	84

Subject 18. Platoon on Reconnaissance

Lesson 1. (Tactical exercise on foot) Actions to be taken by a platoon on ambush mission: Selecting and studying the ambush area. Organizing observation. Disposition and camouflaging of the platoon. Sudden assault on the enemy. Annihilating the enemy soldiers and officers. Taking of prisoners. Salvaging of documents from those killed in action. Withdrawing under the protection of smokescreen after completion of mission.

Lesson 2. (Tactical maneuver) Conducted with the use of carriers according to the contents of Lesson 1.

Lesson 3. (Tactical exercise conducted with the use of armored carriers) .Actions to be taken by an armored carrier platoon of an independent reconnaissance unit in reconnoitering the enemy defending the opposite side of a river: Organizing observation of the enemy defending the river. Approaching the river and selecting a crossing point (bridge, ford). Organizing the river-crossing of a patrol and a patrol unit. Reconnaissance of the enemy on the opposite bank of the river.

Lesson 4. (Tactical manuever) Conducted according to the contents of Lesson 3 with the use of armored carrier.

Subject 19. Postmarch Assault of Reinforced Company against Enemy Hastily Switching to Defense (Tactical maneuver on foot lasting one day and night)

Reconnaissance in approaching enemy defense position. Understanding the mission and adoption of decision. Advance by the company commander accompanied by a KUBUNDAE commander under his command and a supporting KUBUNDAE commander to a point where the enemy defense can be observed. Issuing combat orders. Organizing coordinated actions. Advancing of the company to the enemy's forward defense perimeter under fire cover and launching an immediate assault. Developing the attack within the enemy's defense in depth. Coordinated actions by the company and adjacent units.

Subject 20. Reinforced Company in Defense (Tactical maneuver on foot lasting one and a half days)

The contents are the same as those in Subject 25 for the infantry KUBUNDAE.

Subject 21. Company on Reconnaissance (Tactical maneuver conducted with the use of armored carriers)

Lesson 1. Actions of a company acting as a reconnaissance unit when there is no direct contact with the enemy: Understanding the mission. Issuing combat orders. Advancing to the jump-off line. Organizing observation and security. Dispatching of a reconnaissance patrol. Order of advance of the reconnaissance patrol. Communications between the reconnaissance unit and the patrol. Coordinated command of a company in conducting reconnaissance on the enemy. Making a report of the reconnaissance and its dispatching.

Lesson 2. Actions of a company acting as a reconnaissance unit after penetrating into the enemy's main defense area: Organizing and conducting observation. Reconnoitering the no-man's land, isolated positions and the enemy's second line of defense. Reconnaissance of the flanks and adjacent points. Reconnaissance of the engineer-chemical obstacles and their overcoming. Penetration by the patrol and reconnaissance unit through a defense area which is not occupied by the enemy, and conducting reconnaissance. Execution of command and communication within the reconnaissance unit. Making the reconnaissance report and forwarding it to regimental headquarters.

Lesson 3. Actions to be taken by a company in reconnaissance when pursing the enemy across a river: Understanding the mission and making a decision. Issuing orders. Dispatching a reconnaissance patrol. Order of advance of the reconnaissance patrol. Reconnaissance of the retreating enemy. Reconnaissance of approaching enemy reserve unit. Actions of a reconnaissance unit when encountering the enemy in no-man's land and at the strong points. Assignment of supplementary tasks to the patrol unit. Reconnaissance unit command during reconnaissance of a river. Actions of a reconnaissance unit in crossing a river. Coordination of actions with adjacent reconnaissance KUBUNDAE and the forward PUDAE. Making the reconnaissance report and transmitting the report by radio communication.

Lesson 4. This lesson will be conducted based on the contents of the lesson for night exercise.

III. Company Machine Gun KUBUNDAE and Heavy Machine Gun KUBUNDAE

Subjects and Allocation of Time

Subject Number	Title	Hours	
		Co MG	HMG
	First Phase		
7	Platoon in Attack	-	8
8	Platoon in Defense	6	6
	Participation in the General Arms Tactical Maneuver of Subjects 24, 25 and 26	40	32
	Total	46	46
	Second Phase		
	Participation in the General Arms Tactical Maneuver of Subjects 27 and 28	60	60
	Total	60	60
	Third Phase		
	Participation in the General Arms Tactical Maneuver of Subjects 29, 30 and 31	84	84
	Total	84	84
	Grand Total	190	190

Remarks. The company machine gun KUBUNDAE will participate in all the lessons of Subjects 24, 25 and 26 for the infantry company. The heavy machine gun KUBUNDAE will participate only in the tactical maneuvers of the abovementioned subjects.

First Phase

Subject 7. Platoon in attack (Tactical exercise)

Lesson 1. Supporting the assault of an infantry KUBUNDAE against the enemy's prepared defense in depth: Constructing and occupying the fire position. Supporting the attack of the infantry KUBUNDAE with fire. Covering the maneuvering of the infantry KUBUNDAE during combat in the defensive position in depth with fire. Consolidating the ground gained and repelling enemy counterattack.

Lesson 2. Platoon action in attacking a residential area: Selection of fire position for firing from gaps in the fences and walls of a building, and for firing from road junctions. Covering the infantry KUBUNDAE's assault of a building with fire. Repelling the enemy counter-attack.

Lesson 3. Platoon actions in night attack: Lesson 3 will be conducted according to contents of Lesson 2.

Subject 8. Platoon in Defense (Tactical exercise)

Lesson 1. Repelling enemy attack: Combat preparations and actions of the platoon during the enemy assault. Annihilating enemy troops penetrating into the defense area or into the positions of adjacent freindly units. Supporting the counterattack the infantry KUBUNDAE.

Lesson 2. Characteristics of platoon actions during night defense. This lesson will be conducted based on the contents of Lesson 1.

IV. Antiaircraft Machine Gun KUBUNDAE

Subjects and Allocation of Time

Subject Number	Title	Hours
	First Phase	
11	Platoon in Attack	8
12	Platoon in Defense	9
13	Platoon Action in Antiaircraft Defense for River Crossing	8
	Total	25
	Second Phase	
	Participation in the General Arms Tactical Maneuver of Subjects 27 and 28	60
	Total	60
	Third Phase	
	Participation in the General Arms Tactical Maneuver of Subjects 29, 30 and 31	84
	Total	84
	Grand Total	169

First Phase

Subject 11. Platoon in Attack

The contents are the same as those of Subject 8 for the winter training period.

Subject 12. Platoon in Defense

The contents are the same as those of Subject 10 for the winter training period.

Subject 13. Platoon Action in Antiaircraft Defense during River Crossing (Tactical maneuver)

Advancing secretly to the river-crossing point. Reconnaissance, selection and establishment of primary fire position and alternate position.

Issuing of combat orders. Prefiring preparation of machine guns and preparation of firing data. Actions during enemy air attack. Fire command. Displacement. Restoring of positions.

V. Artillery and Mortar KUBUNDAE

Subjects and Allocation of Time

Subject Number	Title	Hours	
		Arty	Mortar
	First Phase		
15	Supporting Actions of Artillery (Mortar) Battery during the Infantry KUBUNDAE's Assault against Enemy in Defense	8	10
16	Actions of Artillery Battery Organic to Artillery-Antitank Reserve Unit in Attack	6	-
17	Actions of Artillery Battery Assigned to a Strong Point	8	-
18	Actions of Mortar-Artillery Company (Mortar Company) in Supporting an Infantry KUBUNDAE in Defense	-	12
	Participation in the General Arms Tactical Maneuver of Subjects 24, 25 and 26	32	32
	Total	54	54
	Second Phase		
	Participation in the General Arms Tactical Maneuver of Subjects 27 and 28	60	60
	Total	60	60
	Third Phase		
	Participation in the General Arms Tactical Maneuver of Subjects 29, 30 and 31	84	84
	Total	84	84
	Grand Total	198	198

Note: 1. The battalion gun KUBUNDAE will consume six hours for the study of Subject 15.

2. The battalion gun KUBUNDAE will study Subjects 15 and 17 by platoons.

First Phase

Subject 15. Supporting Actions of Artillery (Mortar) Battery during the Infantry KUBUNDAE's Assault against Enemy in Defense

Lesson 1. (Tactical exercise for battalion gun and mortar KUBUNDAE) Occupation of prepared fire position. Advancing within the combat formation of the infantry KUBUNDAE simultaneously with the launching of charge against enemy pillboxes during the period of preparation for artillery assault. Observation during advance. Observation during the attack. Destruction of enemy pillboxes.

Lesson 2. (Tactical maneuver) Making a decision and issuing orders. Selection, occupation and observation of the observation post and firing position. Organization of observation, communication and command. Indication of targets. Determining the firing data. Executing the fire mission during the artillery preparation. Supporting the assault and accompanying the infantry and tanks into the enemy's defense in depth. Coordinating actions with the infantry and tanks. Command for firing and advancing. Repelling enemy counterattack.

Subject 16. Actions of Artillery Battery Organic to Artillery-Antitank Reserve Unit in Attack (Tactical exercise)

Disposition of artillery battery at jump off line. Order of advancing after an attacking infantry KUBUNDAE. Reconnaissance of the possible area of deployment. Advance of a reserve unit to the area of deployment and occupation of firing position. Repelling of enemy tank counterattack. Coordinating actions with the main reserve unit, tank reserve unit and mobile obstacle unit.

Subject 17. Actions of Artillery Battery Assigned to a Strong Point (Tactical maneuver)

Understanding the mission. Adoption of decision. Issuing of orders. Occupation and construction of fire positions. Laying of mines at the firing position. Organization of observation, communication and anti-chemical defense. Coordinating actions between the artillery battery (platoon) guns as well as with other fire weapons. Destruction of attacking enemy tanks. Fire and maneuver. Usage of smoke-generating equipment for covering the maneuver.

Subject 18. Actions of Mortar-Artillery Company (Mortar Company) in Supporting an Infantry KUBUNDAE in Defense (Tactical maneuver)

Understanding of mission and adoption of a dicision. Issuing of orders. Establishment of position, observation post and parking area for towing equipment. Organization of reconnaissance, communications, reports and anti-chemical defense. Determining firing data. Designation of targets. Preparation of operational papers for the battery (company;) Repelling enemy infantry and tank attack. Coordinating actions with the infantry and artillery. Annihilation of enemy troops penetrating into the defense in depth.

VI. Self-Propelled Gun KUBUNDAE

Subjects and Allocation of Time

Subject Number	Title	Hours	Mounted Exercise (hours)
	First Phase		
6	Actions of Self-Propelled Gun Platoon in Defending a Strong Point	4	1
7	Self-Propelled Gun Battery in Attack	8	2
8	Self-Propelled Gun Battery in Defense	6	1
	Participation in the General Arms Tactical Maneuver of Subjects 24, 25 and 26	32	6
	Total	50	10
	Second Phase		
	Participation in the General Arms Tactical Maneuver of Subject 27	44	6
	Total	44	6
	Third Phase		
	Participation in the General Arms Tactical Maneuver of Subjects 29, 30 and 31	84	8
	Total	84	8
	Grand Total	178	24

First Phase

Subject 6. Actions of Self-Propelled Gun Platoon in Defending a Strong Point (Tactical maneuver)

Advance of a platoon to the battery defense area. Selection and construction of fire position. Organization of coordinated fire among the platoon self-propelled guns and with adjacent antitank weapons. Drawing up the platoon fire plan. Repelling tank attack in front of the defense area. Moving to alternate position. Supporting the infantry counterattack.

Subject 7. Self-Propelled Gun Battery in Attack

Lesson 1. (Tactical exercise) Actions of the battery in supporting the infantry's assault against the enemy's prepared defense position: Reconnaissance of the enemy and terrain in the direction of assault. Preparation of fire position. Advancing to the fire position. Executing the fire mission during artillery preparation. Supporting the infantry with continuous fire and accompanying the infantry after launching the assault. Repelling the enemy's counterattack during the assault and when the infantry is consolidating the ground gained. Actions of battery during enemy chemical attack.

Lesson 2. (Tactical maneuver) This lesson will be conducted based on the contents of Lesson 1.

Subject 8. Self-Propelled Gun Battery in Defense (Tactical exercise)

Reconnaissance of the terrain. Study of directions of which possible enemy tank and self-propelled gun attack. Selection and construction of fire position. Repelling enemy tank attack. Moving to alternate position and destruction of enemy tanks penetrating into the battalion defense area. Supporting the counterattack of the infantry KUBUNDAE with firepower. Actions of a battery during enemy chemical attack.

VII. Engineer KUBUNDAE, Signal KUBUNDAE, Anti-Chemical KUBUNDAE and Security KUBUNDAE

Subjects and Allocation of Time

Subject Number	Title	Hour
	First Phase	
5	Platoon in Attack	7
	Total	7
	Second Phase	
6	Platoon in Defense	8
	Total	8
	Grand Total	15

First Phase

Subject 5. Platoon in Attack

The contents are the same as those of Lessons 1, 2, 4 of Subject 15 for the infantry KUBUNDAE in the winter training period.

Second Phase

Subject 6. Platoon in Defense

The contents are the same as Subject 16 for the infantry KUBUNDAE in the winter training period.

Chapter 3. Marksmanship Training

Purpose of training:

1. To enable soldiers to fire their respective weapons efficiently.

2. To acquaint the soldiers with the knowledge on the structure, care and maintenance of weapons.

3. To train the self-propelled gun crew and platoons to function as part of an artillery company.

I. Riflemen and Submachine Gunners

Subjects and Allocation of Time

Subject Number	Title	Hours for KUBUNDAE	
		Infantry	Recon-naissance
	First Phase		
11	Firing Carbine (Submachine Gun) at Moving Targets	27	27
12	Firing Carbine (Submachine Gun) during March	16	16
13	Firing Light Grenade-Launcher at Moving Targets	12	-
14	Firing Machine Gun from Armored Troop Carriers at Halt or Momentary Halt	-	12
	Total	55	55
	Second Phase		
15A	Firing Carbine at Concealed and Camouflaged Targets (Only for KUBUNDAE Equipped with Carbines)	24	24
15B	Firing Submachine Gun at an Independent or Collective Targets (Only for KUBUNDAE Equipped with Submachine Guns)		
16	Firing Carbine (Submachine Gun) under Limited Visibility	22	22
	Total	46	46
	Third Phase		
17	Firing Light Machine Gun at Stationary Targets	20	20
18	Firing Practice by Squads on Various Targets of Unknown Distances	20	20

Subjects and Allocation of Time (Cont'd)

Subject Number	Title	Hours for KUBUNDAE	
		Infantry	Recon-naissance
18 (cont'd)	Finishing Touch to the Marksmanship Training on Subjects Already Studied	8	8
	Total	48	48
	Grand Total	149	149

1st Phase

Subject 11. Firing Carbine (Submachine Gun) at Moving Targets — 27 Hours

Section 1. Parts of machine gun — 2 hours.

Lesson 1. Inspection of carbine (submachine gun), assembled.

Lesson 2. Inspection of carbine (submachine gun), disassembled.

Section 2. General principles of infantry weapon marksmanship — 2 hours.

Principles of firing at moving targets, firing table and firing data, and adjustment of sight.

Section 3. Methods of firing a carbine (submachine gun) and firing regulations — 14 hours.

Lesson 1. Methods of firing at targets moving on the "firing side" (TN - Presumably, perallel to the firing line) and firing regulations.

Lesson 2. Methods of firing at targets moving perpendicular or oblique to the "firing side" and firing regulations.

Lesson 3. Practical exercise in leading moving targets for covering fire.

Lesson 4. Practical exercise in leading moving targets for firing from the ready position.

Lesson 5. Methods of firing at an airplane and firing regulations.

Lesson 6. Methods of firing at parachute troops and firing regulations.

Lesson 7. Firing practice to determine the principles of sight adjustment for range and windage targets is conducted on and moving targets at 100, 200, and 300 meters.

Lesson 8. Firing practice.

Section 4. Hand grenade throwing — 4 hours.

Lesson 1. Capabilities, use, and parts of antitank hand grenade and fuse; conditions of the components of a hand grenade before arming and their functions after arming.

Lesson 2. Methods of arming and unarming antitank hand grenades; inspection of components of a hand grenade; handling of hand grenades and regulations on safety.

Lesson 3. Methods of throwing antitank hand grenades from various positions at a tank moving in various directions.

Section 5. Observation and determination of distances — 5 hours.

Lesson 1. Selection, establishment and camouflage of observation site; disposition of observation troops.

Lesson 2. Study of the enemy and terrain within the area of observation; determination of targets and of their importance; report on observation.

Lesson 3. Determination of distances by sight in relation to surface objects and personnel within a 1,000 meter renge.

Lesson 4. Methods of determining distances within a limited time in relation to surface objects and targets.

Subject 12. Firing Carbine (Submachine Gun) during March — 16 Hours

Section 1. Parts of carbine (submachine gun) — 2 hours. Trouble-shooting during carbine (submachine gun) fire.

Section 3. Methods of firing carbine (submachine gun) and firing regulations — 10 hours.

Lesson 1. Methods of rapid firing from a standing position at quickly disappearing targets.

Lesson 2. Methods of firing without halting during march.

Lesson 3. Firing during march at stationary targets.

Lesson 4. Firing during march at moving targets.

Lesson 5. Methods of loading carbine (submachine gun for firing at disappearing and moving targets during march.

Lesson 6. Firing practice.

Section 5. Observation and determination of distance — 4 hours.

Lesson 1. Methods of observation and determining the distance of targets within a 1,000 meter range which appear and disappear suddenly behind concealment and the procedure for making entries in the observation log.

Lesson 2. Determination of distances by voice or flare.

Subject 13. Firing Light Grenade-launcher at Moving Targets — 12 Hours

The contents are mentioned in Volume I.

Subject 14. Firing Machine Gun at Halt or Momentary Halt from an Armored Troop Carrier — 12 Hours

Section 1. Parts of a machine gun — 5 hours.

Lesson 1. Mission, capabilities and general structure of a machine gun; structure of the basic components of a machine gun.

Lesson 2. Assembly and disassembly of a machine gun, preparation of machine gun for firing; methods of loading an ammunition belt.

Lesson 3. Common troubles of a machine gun during fire.

Section 3. Firing methods and firing regulations — 7 hours.

Lesson 1. Preparation for action from march; execution of the order "Prepare for action;" preparation for fire, loading, installation of the rear sight, sighting and firing.

Lesson 2. Methods of firing at halt at disappearing and moving targets and firing regulations.

Lesson 3. Methods of firing at momentary halt at disappearing targets and firing regulations.

Lesson 4. Firing practice.

Second Phase

Subject 15A. Firing of Carbine at Concealed and Camouflaged Targets — 24 Hours (This subject will be studied only in KUBUNDAE equipped with carbines)

Section 1. Parts of a carbine — 6 hours.

The contents are the same as Section 1 of Subject 8 for winter training period.

Section 3. Methods of firing carbine and firing regulations — 14 hours.

Lesson 1. Methods of firing at an independent target behind slight cover and firing regulations.

Lesson 2. Methods of firing at a target behind entensive cover and firing regulations.

Lesson 3. Methods of firing at a target by utilizing an auxiliary sight.

Lesson 4. Methods of firing without aiming from a forest or behind a tree and firing regulations.

Section 4. Hand grenade throwing — 4 hours.

Lesson 1. Improve knowledge of the structure of a hand grenade and fuse, and functions of the components of a hand grenade.

Lesson 2. Methods of throwing a hand grenade at the embrasures of a fortification from a prone position.

Lesson 3. Methods of throwing a hand grenade at the embrasure after rushing or from a crawling position.

Subject 15B. Firing Submachine Gun at an Independent or Collective Target - 24 Hours (This subject will be studied only in KUBUNDAE equipped with submachine guns.)

Section 1. Parts of a submachine gun — 6 hours.

The contents are the same as Section 1 of Subject 8 for winter training period.

Section 3. Methods of firing a submachine gun and firing regulations — 14 hours.

Lesson 1. Regulations on firing at an independent target behind a slight cover.

Lesson 2. Short burst firing methods at a collective target and firing regulations.

Lesson 3. Long burst firing methods at a collective target while charging and firing regulations.

Lesson 4. Short burst firing methods without aiming from a forest or behind a tree and firing regulations.

Lesson 5. Firing practice — 4 hours.

The contents are the same as Section 4 of Subject 15 for KUBUNDAE equipped with carbine.

Subject 16. Firing Carbine (Submachine Gun) under Limited Visibility -- 22 Hours

Section 3. Methods of firing a carbine (submachine gun) and firing regulations — 13 hours.

Lesson 1. Methods of loading a carbine during night, adjustment of rear sight, and methods of unloading and loading ammunition.

Lesson 2. Methods of firing during the night from various positions at silhouette of a collective target and firing regulations.

Lesson 3. Methods of preparing a carbine (submachine gun) during the daytime for firing at or towards the boundary line during the night.

Lesson 4. Methods of firing carbines (submachine guns) during the night at an illuminated target without preliminary preparations and firing regulations.

Lesson 5. Aiming carbine (submachine gun) during the night in a given direction or at an illuminated target without preliminary preparation.

Lesson 6. Firing practice.

Section 4. Hand grenade throwing — 5 hours.

Lesson 1. Methods of throwing hand grenades at windows of buildings during the night from various positions.

Lesson 2. Accurate methods of throwing a hand grenade at disappearing target considerable distance simultaneously from trenches in the forward line and at the flanks.

Lesson 3. Throwing hand grenade at moving and disappearing targets.

Section 5. Observation and determination of distances -- 4 hours.

Lesson 1. Characteristics of the observation during night, selection of sites for observation; maintaining silence and blackout; search for targets and determination of its locations; report on the detection of targets.

Lesson 2. (This lesson will be conducted by demonstration.) Methods of determining distances by sound and light.

Third Phase

Subject 17. Firing Light Machine Gun at Stationary Targets -- 20 Hours

Section 1. Parts of light machine gun -- 10 hours.

Lesson 1. Mission, capabilities and general structure of the light machine gun, part and functions of a gun barrel, gas chamber, regulator, engine room (TN - Presumably receiver, cooling jacket, rear sight and magazine.

Lesson 2. Parts and functions of a bolt, bolt body, gas piston, floor plate, trigger group, back plate, and bipod mount.

Lesson 3. Parts and functions of a magazine; disassembly and assembly and loading of a magazine.

Lesson 4. Disassembly and assembly of a machine gun; procedure for daily inspection of a machine gun.

Section 3. Methods of firing a light machine gun and firing regulation -- 10 hours.

Lesson 1. Selection of a site for firing position and emplacement of a machine gun; disposition of gunners and assistant gunners behind machine guns.

Lesson 2. Preparation for firing from prone position; loading and unloading machine gun; adjustment of rear sight.

Lesson 3. Fire preparation, sighting, and starting and suspending fire.

Lesson 4. Firing machine gun with help of a brace, and firing from behind concealed positions.

Lesson 5. Firing practice.

Subject 18. Firing practice by squads on various targets of unknown distance.

Section 3. Methods of firing and firing regulations -- 16 hours.

Lesson 1. Independent squad fire at various disappearing targets and simultaneous fire.

Lesson 2. Fire preparation, in other words, selection of targets, adjustment of rear sight and establishment of aiming and procedures for changing the aiming point on basis of the distance, and height the target, and the wind velocity and direction.

Lesson 3. Firing by squads at camouflaged or disappearing targets from behind shelter or trench.

Lesson 4. Firing by squad at disappearing targets, independent moving targets and collection targets; concentration, dispersion, shifting and suspension of fire, barrage fire.

Lesson 5. Firing practice.

Section 5. Observation and determination of distances -- 4 hours.

Lesson 1. Observation during offensive combat.

Lesson 2. Observation during defense.

II. Light Machine Gunner

Subjects and Allocation of Time

Subject Number	Title	Hours for KUBUNDAE	
		Infantry	Reconnaissance
	First Phase		
13	Firing Light Machine Gun Moving Targets	27	27
14	Firing Light Machine Gun during March	16	16
15	Firing Light Grenade-launcher at Moving Targets	12	—
16	Firing Machine Gun at Halt or Momentary Halt from an Armored Troop Carrier	—	12
	Total	55	55
17	Firing Light Machine Gun at Concealed or Camouflaged Targets	24	24
18	Firing Light Machine Gun Fire under Limited Visibility	22	22
	Total	46	46
	Second Phase		
19	Firing Practice by Squads at Targets of Unknown Distance	20	20
20	Firing Carbine at Stationary Targets within Limited Time	20	20
	Finishing Touch to the Marksmanship Training on Subjects Already Studied	8	8
	Total	48	48
	Grand Total	149	149

First Phase

Subject 13. Firing Light Machine Gun at Moving Targets — 27 Hours

Section 1. Parts of light machine gun -- 2 hours.

Lesson 1. Disassembly, assembly, cleaning and lubrication of a magazine.

Lesson 2. Methods of handling machine gun under various situations and conditions and regulations on storage.

Section 2. Principles of infantry weapons marksmanship — 2 hours.

The contents are the same as Section 2 of Subject 11 for riflemen and submachine gunners.

Section 3. Methods of firing light machine gun and firing regulations — 14 hours.

Lesson 1. Determination of lead on moving targets; methods of shifting aiming points in accordance with the movement of targets.

Lesson 2. Firing at targets moving towards or away front the front (targets in an attacking or retreating phase and at targets moving at an angle).

Lesson 3. Firing at targets by constant tracking.

Lesson 4. Methods of firing at aerial targets and firing regulations.

Lesson 5. Fire preparation to determine the adjustment of sight on moving targets and relocating aiming points for windage against targets at distances of 200, 300 and 400 meters.

Lesson 6. Firing practice.

Section 4. Hand grenade throwing — 4 hours.

The contents are the same as Section 4 of Subject 11 for riflemen and submachine gunners.

Section 5. Observation and determination of distances -- 5 hours.

The contents are the same as Section 5 of Subject 11 for riflemen and submachine gunners.

Subject 14. Firing Light Machine Gun during March — 16 Hours

Section 1. Parts of light machine gun — 2 hours.

Improve knowledge and skill in inspection of machine gun, assembled and disassembled, and firing training in its fire.

Section 3. Methods of firing light machine gun and firing regulation — 10 hours.

Lesson 1. Methods of fire during march.

Lesson 2. Methods of reloading a machine gun in firing position during march.

Lesson 3. Methods of conducting frontal traversing fire at a momentary halt during the advance and firing regulations.

Lesson 4. Methods of firing during advance (without halt) at an independent target and firing regulations.

Lesson 5. Methods of firing during advance along the slope of a hill.

Lesson 6. Firing practice.

Section 5. Observation and determination of distances — 4 hours.

The contents are the same as Section 5 of Subject 12 for riflemen and submachine gunners.

Subject 15. Firing Light Grenade-launcher at Moving Targets — 12 Hours

The contents are mentioned in the Volume I, Lesson Plan 13.

Subject 16. Firing Machine Gun Halt or Momentary Halt from an Armored Troop Carrier — 12 Hours

The contents are the same as Subject 14 for riflemen and submachine gunners.

Second Phase

Subject 17. Firing Light Machine Gun at Concealed or Camouflaged Targets — 24 Hours

Section 1. Parts of light machine gun — 6 hours.

The contents are the same as Section 1 of Subject 10 for winter training period.

Section 3. Firing light machine gun and firing regulations — 14 hours.

Lesson 1. Methods of firing at independent target behind slight cover and firing regulations.

Lesson 2. Firing at a target behind entensive cover and firing regulations.

Lesson 3. Firing at a target utilizing auxiliary aiming point.

Section 4. Hand grenade throwing -- 4 hours.

The contents are the same as Section 4 of Subject 15 for riflemen and submachine gunners.

Subject 18. Firing Light Machine Gun under Limited Visibility -- 22 Hours

Section 3. Firing light machine gun and firing regulations — 13 hours.

Lesson 1. Loading magazine with ammunition loading and unloading machine gun and adjustment of rear sight at night.

Lesson 2. Firing at night from various positions at silhouette of collective target.

Lesson 3. Preparation of machine gun before dark for fire at night.

Lesson 4. Firing at night at illuminated targets and firing regulations.

Lesson 5. Firing at night in a given direction without preliminary preparation for firing at night.

Lesson 6. Firing practice.

Section 4. Hand grenade throwing — 5 hours.

The contents are the same as Section 4 of Subject 16 for riflemen and submachine gunners.

Section 5. Observation and determination of distances — 4 hours.

The contents are the same as Section 5 of Subject 16 for riflemen and submachine gunners.

Third Phase

Subject 19. Firing Practice by Squads at Targets of Unknown Distance — 20 Hours

This subject will be studied by infantry squad component in accordance with Subject 18 for riflemen and submachine gunners.

Subject 20. Firing Carbine at Stationary Targets within a Limited Time

Section 1. Parts of carbine — 8 hours.

Lesson 1. Procedures of inspection for infantry carbine.

Lesson 2. Preparation of carbine for firing and inspection of carbine, assembled and disassembled.

Lesson 3. Trouble shooting during carbine fire.

Section 3. Firing rifle and firing regulations — 12 hours.

Lesson 1. Selection of site and preparation for firing from a prone, kneeling and standing positions.

Lesson 2. Preparation for firing from different positions under shelter or in a trench.

Lesson 3. Firing at will at independent target within limited time and firing regulations.

Lesson 4. Firing practice.

III. Company Machine Gun KUBUNDAE and Heavy Machine Gun KUBUNDAE

Subjects and Allocation of Time

Subject Number	Title	Hours
	First Phase	
12	Firing Machine Gun at Disappearing Targets	16
13	Firing Machine Gun at Moving Targets	24
14	Intermittent Machine Gun Fire and Flanking Fire	15
	Total	55
	Second Phase	
15	Firing Machine Gun at Concealed or Camouflaged Targets	22
16	Firing Machine Gun under Limited Visibility	24
	Total	46
	Third Phase	
17	Practice in Firing Machine Guns by Squad on Various Targets of Unknown Distance	22
18	Firing Carbine at Stationary Targets within a Limited Time	18
	Finishing Touch to the Marksmanship Training on Subjects Already Studied	8
	Total	48
	Grand Total	149

First Phase

Subject 12. Firing Machine Gun at Disappearing Targets — 16 Hours

Section 1. Parts of machine gun — 4 hours.

Lesson 1. Trouble shooting during firing and preventive maintenance.

Lesson 2. Preparation for machine gun fire; machine gun troubles impairing normal firing capacity.

Section 3. Firing machine gun and firing regulations — 12 hours.

Lesson 1. Firing at sudden appearing and disappearing targets and firing regulations firing while shifting fire within a limited time.

Lesson 2. Regulations for firing in crosswind of varying intensity.

Lesson 3. Firing when tonic agents are employed; firing in mountainous areas and firing regulations.

Subject 13. Firing Machine Gun at Moving Targets — 24 Hours

Section 1. Parts of a machine gun — 2 hours.

Lesson 1. Protection and care of machine gun under varying conditions.

Lesson 2. Preparation for machine gun fire; inspection of machine gun, disassembled and assembled; procedures for loading ammunition belt.

Section 2. General principles of infantry weapons marksmanship — 2 hours.

The contents are the same as Section 2 of Subject 11 for riflemen and submachine gunners.

Section 3. Firing machine gun and firing regulations — 16 hours.

Lesson 1. Preparation for fire and firing after advancing by road-march or double time march.

Lesson 2. Determination of lead when firing at moving targets.

Lesson 3. Firing at targets moving parallel to the firing line and firing regulations.

Lesson 4. Methods of firing at targets moving at an angle to the firing line and firing regulations.

Lesson 5. Various methods of firing at moving targets.

Lesson 6. Firing at targets moving at an angle to the firing line allowing for adjustment of sight for movement of target and crosswind.

Lesson 7. Firing machine gun at aerial targets.

Lesson 8. Firing practice .

Section 4. Hand grenade throwing — 4 hours.

The contents are the same as Section 4 of Subject 11 for riflemen and submachine gunners.

Subject 14. Intermittent Machine Gun Fire and Flanking Fire — 15 Hours

Section 1. Parts of machine gun — 2 hours.

Lesson 1. Troubles impairing the normal firing capabilities of machine gun.

Section 2. Firing machine gun and firing regulations — 8 hours.

Lesson 1. Conditions to be observed during intermittent fire and flanking fire; determination of a "safety angle".

Lesson 2. Intermittent fire and flanking fire and firing regulations.

Section 5. Observation and determination of distences — 5 hours.

The contents are the same as Section 5 of Subject 11 for riflemen and submachine gunners.

Second Phase

Subject 15. Firing Machine Gun at Concealed or Camouflaged Target — 22 Hours

Section 1. Parts of machine gun.

Lesson 1. Inspection of defective and replacement machine gun parts.

Lesson 2. Inspection of machine gun, assembled and disassembled and preparation for fire.

Section 2. General principles of infantry weapons marksmanship — 2 hours.

Lesson 1. Practical significance of trajectory; low and high trajectories; effective field of fire defiladed area range and effective range.

Lesson 2. General knowledge on effectiveness of fire; number of rounds required to destroy various targets.

Section 3. Firing machine gun and firing regulations — 8 hours.

Lesson 1. Methods of conducting adjustment fire at the boundary line and reference points.

Lesson 2. Methods of firing at independent concealed target and firing regulations.

Lesson 3. Methods of firing at concealed collective target behind entensive cover and firing regulations.

Lesson 4. Firing practice.

Section 4. Hand grenade throwing — 4 hours.

The contents are the same as Section 4 of Subject 15 for riflemen and submachine gunners.

Section 5. Observation and determination of the distences — 6 hours.

The contents are the same as Section 5 of Subject 12 for riflemen and submachine gunners.

Subject 16. Firing Machine Gun under Limited Visibility — 24 Hours

Section 1. Parts of machine gun — 3 hours.

Troubles impairing the normal firing capabilities of a machine gun.

Section 3. Firing machine gun and firing regulations — 14 hours.

Lesson 1. Selection of site for firing position, preparation of machine gun and position for conduct firing under limited visibility.

Lesson 2. Firing under limited visibility.

Lesson 3. Firing at illuminated and unilluminated targets.

Lesson 4. Firing practice.

Section 4. Hand grenade throwing — 3 hours.

The contents are the same as Section 4 of Subject 16 for riflemen and submachine gunners.

Section 5. Observation and determination of distances — 4 hours.

The contents are the same as Section 5 of Subject 16 for riflemen and submachine gunners.

Third Phase

Subject 17. Practice in Firing Machine Guns by Squad on Various Targets of Unknown Distance — 22 Hours

Section 3. Firing machine gun and firing regulations — 18 hours.

Lesson 1. Allowance for wind and temperature for firing at suddenly disappearing targets which or promptly concealed targets or moving targets.

Lesson 2. Firing at targets under cover, and camouflaged and armored targets.

Lesson 3. Fire preparation for firing at small targets, wide targets and targets deep within enemy territory.

Lesson 4. Firing at embrasures.

Lesson 5. Equipment for firing from the windows, doors, holes in the walls, roofs, down-stairs, the corners of buildings and cells; installation of embrasures and strengthening of cover.

Lesson 6. Methods of conducting adjustment fire at the boundary line and reference points.

Lesson 7. (Only for heavy machine gun) Selection of site for fire position for conducting flanking fire and firing at will.

Lesson 8. Firing machine gun by squads and platoons at various targets during offense.

Lesson 9. Conducting concentrated and dispersed fire at trench parapets, communication trenches and various targets.

Lesson 10. Firing machine gun by squads and platoons at various targets during defense.

Lesson 11. Firing practice.

Section 5. Observation and determination of distances — 4 hours.

The contents are the same as Section 5 of Subject 18 for riflemen and submachine gunners.

Subject 18. Firing carbine at Stationary Targets within a Limited Time

IV. Antiaircraft Machine Gun KUBUNDAE

Subjects and Allocation of Time

Subject Number	Title	Hours
	First Phase	
11	Firing Antiaircraft Machine Gun at Disappearing Targets and Moving Ground Targets	30
12	Firing of Antiaircraft Machine Gun at Aircraft Diving Suddenly toward a Fire Position	18
13	Firing of Antiaircraft Machine Gun at Aircraft Diving Suddenly toward Objects under Cover	16
14	Firing Antiaircraft Machine Gun at Level-flying Aircraft	12
	Total	76
	Second Phase	
15	Firing of Antiaircraft Machine Gun Fire at Rapidly Approaching Aircraft	17
16	Firing Antiaircraft Machine Gun at Aircraft during the Night	17
17	Firing of Antiaircraft Machine Gun at Parachute Troop	12
	Total	46
	Third Phase	
18	Practice Firing by Platoons to Repulse Aerial Formation Attack	30

Subjects and Allocation of Time (Cont'd)

Subject Number	Title	Hours
19	Firing Carbine at Stationary Targets within Limited Time	8
	Training to Improve Marksmanship in Subjects Already Studied	10
	Total	48
	Grand Total	170

First Phase

Subject 11. Firing Antiaircraft Machine Gun at Disappearing Targets and Moving Ground Targets — 30 Hours

Section 1. Parts of an Antiaircraft Machine Gun — 6 Hours

Lesson 1. Inspection of parts of machine gun and accessories prior to loading.

Function of various parts of machine gun and accessories during loading.

Lesson 2. Function of various parts of machine gun and accessories during fire; inspection of various parts and accessories after suspension of fire.

Lesson 3. Function of antiaircraft machine gun traversing mechanism trigger group, "disconnection system" and elevating mechanism; function of various parts of the reloading system.

Lesson 4. Preparation for firing an antiaircraft machine gun.

Section 2. General firing principles of infantry weapon — 2 hours.

Lesson 1. The contents are the same as Section 2 of Subject 11 for riflemen and submachine gunners.

Lesson 2. Intermittent fire and flanking fire.

Section 3. Firing antiaircraft machine gun and firing regulations — 15 hours.

Lesson 1. Preparation of firing position in trench for firing at ground targets.

Lesson 2. Regulations on firing at disappearing targets, targets promptly concealed and camouflaged targets; selection of aiming point and time to commence firing.

Lesson 3. Methods of traversing fire and shifting fire in depth and firing regulations.

Lesson 4. Regulations on firing at moving targets.

Lesson 5. Determination of lead, the aiming point and the time to commence firing in firing at moving ground targets.

Lesson 6. Methods of aiming antiaircraft machine gun at moving targets.

Lesson 7. Regulations on firing at illuminated and unilluminated targets under limited visibility; preparation of firing positions and antiaircraft machine gun for firing at night.

Lesson 8. Regulations on intermittent fire and flanking fire.

Lesson 9. Regulations on trial fire.

Lesson 10. Firing practice.

Section 4. Hand grenade throwing — 3 hours.

The contents are the same as Section 4 of Subject 11 for riflemen and submachine gunners.

Section 5. Observation and determination of distances — 4 hours.

The contents are the same as Section 5 of Subject 11 for riflemen and submachine gunners.

Subject 12. Firing Antiaircraft Machine Gun at Aircraft Diving Suddenly toward a Fire Position — 18 Hours

Section 3. Firing an antiaircraft machine gun and firing regulations — 14 hours.

Lesson 1. Determination of the start and angle of sudden dive by aircraft; determination of the CH'UGYONG (TN Presumably lead.) for suddenly diving aircraft.

Lesson 2. Regulations on aiming aircraft suddenly diving toward a machine gun.

Lesson 3. Methods of maintaining continuous fire; use of chart for calculating the lead.

Lesson 4. Conducting of barrage fire; aiming at aircraft suddenly diving toward a firing position.

Lesson 5. Regulations on aiming at aircraft suddenly diving and pulling out of a dive.

Lesson 6. Firing practice.

Section 5. Observation and determination of distances — 4 hours.

The contents are the same as Section 5 of Subject 12 for riflemen and submachine gunners.

Subject 13. Firing Antiaircraft Machine Gun at Aircraft Diving Suddenly toward Objects under Cover

Section 1. Parts of an antiaircraft machine gun — 4 hours.

Improving knowledge and skill in accordance with Section 1 of Subject 8 for the winter training period.

Section 3. Firing antiaircraft machine gun and firing regulations.

Lesson 1. Fire at suddenly disappearing aircraft firing at aircraft — 16 hours.

Section 1. Parts of antiaircraft machine gun — 5 hours.

Lesson 1. Common troubles during firing, preventive maintenance and care.

Lesson 2. Disassembly and assembly of machine gun and parts.

Lesson 3. Protection (storage) of an antiaircraft machine gun under marching and combat conditions.

Lesson 4. Inspection of machine gun, disassembled and assembled; inspection of antiaircraft machine gun accessories, ammunition belt belencer and spare parts.

Section 3. Firing antiaircraft machine gun and firing regulations — 7 hours.

Lesson 1. Methods of firing at aircraft suddenly diving toward an object located away from the antiaircraft machine gun firing position and firing regulations.

Lesson 2. Firing at aircraft suddenly diving at various angles.

Lesson 3. Firing practice.

Section 5. Observation and determination of distances — 4 hours.

Lesson 1. Determination of the distances to ground targets and aerial targets by binoculars.

Lesson 2. Determination of the distance to an aerial target by estimation, KIRA* binoculars and reference point.

Subject 14. Firing Antiaircraft Machine Gun at Level-flying Aircraft — 12 Hours

Improve knowledge and skill in accordance with Section 3 of Subject 9 for the winter training period.

Second Phase

Subject 15. Firing Antiaircraft Machine Gun at Rapidly Approaching Aircraft — 17 Hours

Section 1. Parts of antiaircraft machine gun — 4 hours.

Improve knowledge and skill in accordance with Section 1 of Subject 8 for the winter training period.

Section 3. Firing antiaircraft machine gun and firing regulations.

Lesson 1. Firing at suddenly approaching aircraft; firing at aircraft during march.

Lesson 2. Methods for gunners to evaluate the deviation of line of fire to the target and methods of correction.

Lesson 3. Firing at aircraft in short and long bursts.

Lesson 4. Solving problems for firing at attacking aircraft; execution of the order, "Fire at attacking aircraft".

Lesson 5. Firing practice.

Subject 16. Firing Antiaircraft Machine Gun at Aircraft during the Night — 17 Hours

Section 1. Parts of antiaircraft machine gun — 2 hours.

Improving knowledge and skill in accordance with Section 1 of Subject 9 for the winter training period.

Section 3. Firing antiaircraft machine gun and firing regulations — 8 hours.

Lesson 1. Preparation of firing position and antiaircraft machine gun for firing during the night.

Lesson 2. Regulations on firing at illuminated and unillumined targets.

Lesson 3. Regulations on barrage fire; barrage fire at using and vertical slopes.

Lesson 4. Firing practice.

Section 4. Hand grenade throwing — 3 hours.

The contents are the same as Section 4 of Subject 16 for riflemen and submachine gunners.

Section 5. Observation and determination of distances — 4 hours.

The contents are the same as Section 5 of Subject 16 for riflemen and submachine gunners.

Subject 17. Firing Antiaircraft Machine Gun Fire at Parachute Troop — 12 Hours

Section 3. Firing antiaircraft machine gun and firing regulations — 12 hours.

Lesson 1. Preparation for antiaircraft machine gun fire; selection of targets; orders for different class of fire and for commencing fire; regulations on aiming at parachuting targets; estimation of wind direction and amount of drift of parachuting target.

Lesson 2. Duties of personnel when firing is commenced and during fire; observation on results of fire; evaluation of the deviation of line of fire and correction.

Third Phase

Subject 18. Practice Firing by Platoon to Repulse Aerial Formation Attack — 30 Hours

Section 3. Firing antiaircraft machine gun and firing regulations — 26 hours.

Lesson 1. Escort and barrage fire at level-flying aircraft.

Lesson 2. Barrage fire at targets on course angles 0° and 180°.

Lesson 3. Barrage fire at target moving at an angle toward the antiaircraft machine gun position.

Lesson 4. Interdiction fire at aircraft flying at various angles.

Lesson 5. Continuous fire at rapidly disappearing bomber.

Lesson 6. Firing at suddenly diving aircraft either toward a firing position or object under cover.

Lesson 7. Firing during the night at illuminated targets.

Lesson 8. Firing practice.

Section 5. Observation of defense in depth and determination of distances — 4 hours.

The contents are the same as Section 5 of Subject 18 for riflemen and submachine gunners.

Subject 19. Firing Carbine at Stationary Targets within Limited Time — 8 Hours

Section 1. Parts of carbine — 2 hours.

Lesson 1. Procedure for daily inspection of individual carbine.

Lesson 2. Preparation of carbine for fire and inspection of carbine, assembled and disassembled.

Section 3. Firing carbine and firing regulations - 6 hours.

Lesson 1. Selection of site and preparation for firing from prone, kneeling and standing positions.

Lesson 2. Preparation for firing from various positions from trench and behind cover.

Lesson 3. Firing at a assigned independent target within limited time and firing regulations.

Lesson 4. Firing practice.

V. Self-propelled Gun KUBUNDAE

Subject and Allocation of Time

Subject Number	Title	Hours			
		Crew	Self-Propelled Gun Commanders	Gun Commanders and Loaders	Vehicle Operators
	First Phase				
6	Firing at Momentary Halt	17	46	50	—
	Total	17	46	50	—
	Second Phase				
6	Firing at Momentary Halt	4	8	14	—
7	Firing from a Covered Position	9	20	20	—
8	Firing Infantry Weapons	—	4	4	4
	Total	13	32	38	4
	Third Phase				
9	Firing under Special Conditions	10	34	34	—
	Improving Knowledge of Subjects Already Studied	4	6	12	—
	Total	14	40	46	—
	Grand Total	44	118	134	4

First Phase

Subject 6. Firing at Momentary Halt (The study of this subject will be completed in the Second Phase)

Section 3. Regulations on self-propelled gun fire. (Self-propelled gun commanders — 6 hours; artillery commanders and loaders — 8 hours).

Lesson 1. Selection of site for a momentary halt, time for a momentary halt, preparation for initial firing and subsequent fire, initial firing and subsequent fire, initial lay and determination of aiming points; adjustment fire and annihilation of target.

Lesson 2. The characteristics of firing from a momentary halt; at moving targets, trial firing at target moving in various directions; firing from a direct firing range; solution of problems.

Section 4. Procedures for handling a gun. (Crew — 4 hours; self-propelled gun commanders — 42 hours; gun commanders and loaders — 46 hours)

Lesson 1. Coordination of laying during firing from a momentary halt; adjustment of a sight and firing from a momentary halt.

Lesson 2. Firing from a momentary halt at moving targets; the initial lay; adjustment of rear sight equipment; loading of a gun; operation of optical equipment; firing from a momentary halt.

Lesson 3. Coordination of fire from a momentary halt at stationary targets and moving targets; procedure for executing the command "Prepare for combat;" observation and recognition of target; selection of targets and shells; the initial lay; methods for rough aim through the rear sight and at a target during march; procedure for issuing orders to load and to halt vehicle; fine adjustment of sight for firing during halt; observation of shell burst and fire correction, execution of the command "Secure the piece".

Lesson 4. Throwing hand grenade from a self-propelled gun on the move.

Execution of the command "Prepare for hand-grenade combat;" throwing hand grenade at designated target in the vicinity of a self-propelled gun

Section 5. Observation, determination of distances and assignment of targets (Crew — 2 hours; self-propelled gun commanders — 2 hours; gun commanders and loaders — 6 hours.)

Lesson 1. Observation and determination of distances from a self-propelled gun on the move.

Lesson 2. Observation and search of targets from a self-propelled gun during night and determination of the distance to those targets.

Section 6. Firing (Crew — 11 hours.)

Section 7. Firing control of an artillery unit (Crew — 4 hours; self-propelled gun commenders, gun commanders and loaders — 4 hours.)

Lesson 1. Observation, assignment of targets and coordination of fire; the initial lay for firing; procedures for commencing and ceasing fire; duties of the crews for commencing and ceasing fire; reports and orders issued during the firing.

Lesson 2. Combat fire by self-propelled gun company.

Second Phase

Subject 7. Firing from a Covered Position.

Section 4. Duties of the gun crew (Crew — 9 hours; self-propelled gun commanders, artillery commanders and loaders — 20 hours.)

Lesson 1. Training of a self-propelled gun platoon in firing disposition of a self-propelled gun in fire position; methods of prepering self-propelled gun for combat; preperation of a platoon for firing; principles of a sheaf; formation of the parallel sheaf by "mutuel orientation".

Lesson 2. Formation of the parallel sheaf based on the aiming points far away; shifting from the parallel sheaf to "fire-for-effect sheaf", the closed or open sheaf.

Lesson 3. Self-propelled gun platoon fire; preparation for conducting platoon fire; procedure for conducting adjustment fire and fire for effect at stationary targets; rapid fire, pattern firing and independent fire in bursts; suspending resuming and ceasing fire.

Lesson 4. Preparation of fire position for firing occupation of fire position by a self-propelled gun platoon; preparation of self-propelled gun for combat; issuing basic direction to the base piece of a gun battery; establishing minimum rear sight setting; formation of the parallel sheaf; preparation of ammunition for fire; platoon fire at stationary targets; shifting from the basic aiming point to the alternate aiming point.

Lesson 5. Firing during the night by a self-propelled gun platoon; preparation of position for fire during the night; establishment of the primary and alternate illuminated aiming points; adjustment of sight and illumination of terrain; formation of the parallel sheaf by "celestial bodies;" firing; guarding fire position; withdrawal from fire position.

Lesson 6. Firing by a self-propelled gun company; selection of a fire position; preparation of a fire position; duties of the assistant fire control officer in a fire position to be performed until firing is commenced; preparation for fire by an artillery company; firing in a closed sheaf "fire-for-effect sheaf", and open sheaf log-book for maintaining data on targets on which adjustment fire has been conducted; resuming and ceasing fire.

Lesson 7. Combat fire.

Subject 8. Firing Infantry Weapons.

Submachine gun.

Improving firing teshniques from various positions.

Pistol (Nagant Pistol).

Finishing touch to the marksmenship training for pistol (Nagant pistol); firing practice.

Third Phase

Subject 9. Firing under Special Conditions

Section 3. Regulations on self-propelled gun fire (Self-propelled gun commenders, gun commanders and loaders — 10 hours.)

Lesson 1. Firing during the night; regulations on firing at illuminated targets and "flare targets; preparation for firing during the night and under limited visibility; determination of the direction of fire by a panoramic goniometer, determination of the elevation by sight and level; fire planning; laying the gun based on the data prepared in advance.

Lesson 2. Overhead fire and intermittent fire with self-propelled gun; capabilities of the overhead fire and intermittent fire; the initial lay; overhead, intermittent and flanking fire; safety measures during firing; solution of problems.

Section 4. Procedure for handling guns (Crew — 2 hours; self-propelled gun commanders, gun commanders and loaders — 24 hours.)

Lesson 1. Methods of firing during night by preparing of initial data in advance; preparation of initial data for firing during the night and making a chart; laying by goniometer and level; firing during the night based on data prepared before dark.

Lesson 2. Laying for firing at night at fire position conducting fire; the initial lay; laying and firing at fire positions preparing or conducting fire.

Lesson 3. Laying for firing at illuminated targets; the initial lay; preparation, laying and firing at illuminated targets.

Section 5. Observation, determination of distances and assignment of targets. (Crew — 2 hours) Tests in observation, estimation of distances and assignment of targets.

Section 6. Firing. (Crew — 6 hours)

VI. Artillery KUBUNDAE, Mortar KUBUNDAE, Engineer KUBUNDAE, Signal KUBUNDAE and Chemical Defense KUBUNDAE.

Subjects and Allocation of Time

Subject Number	Title	Hours		
		First Phase	Second Phase	Third Phase
3	Firing Carbine at Stationary Targets	5	5	5
	Total	5	5	5

Subject 3. Firing Carbine at Stationary Targets

Improving knowledge and skill obtained during the winter training period and firing practice.

VII. Security KUBUNDAE.

Subjects and Allocation of Time

Subject Number	Title	Hours		
		First Phase	Second Phase	Third Phase
4	Firing Carbine at Disappearing Targets	—	10	—
5	Firing Light Machine Gun at Disappearing Targets	9	4	—
6	Firing Submachine Gun at Disappearing Targets	—	—	8

Subject and Allocation of Time (Cont'd)

Subject Number	Title	Hours		
		First Phase	Second Phase	Third Phase
	Improving Knowledge of Subjects Already Studied	—	—	8
	Total	9	14	16

Subject 4. Firing Carbine at Disappearing Targets — 10 Hours

The contents are the same as Section 3 of Subject 8 for winter training period for riflemen and submachine gunners.

Subject 5. Firing Light Machine Gun at Disappearing Targets — 13 Hours

The contents are the same as Subject 9 for winter training period for light machine guns.

Subject 6. Firing Submachine Gun at Disappearing Targets — 8 Hours

Section 1. Parts of submachine gun — 3 hours.

Lesson 1. Inspection of various parts and equipment of a machine gun prior to loading and operation during loading.

Lesson 2. Inspection of operation of parts and equipment during single round fire and automatic fire.

Section 3. Methods of firing a submachine gun and firing regulations — 5 hours.

Lesson 1. Preparation for firing from a prone position after march or double time march.

Lesson 2. Preparation for firing from various shelters; use of support during fire.

Lesson 3. Methods of firing from various positions at a target which appears momentarily and firing regulations.

Chapter 4. Special (Technical) Training

I. Artillery and Mortar KUBUNDAE

Note: Hours for studying the parts of machine guns, observation equipment and firing duties by the communication troops of an artillery and mortar KUBUNDAE is designated in Table 8 of Volume I.

Parts of gun (mortar) and ammunitions

Purpose of training:

1. To improve the soldiers' knowledge on parts, use and maintenance of machine gun.
2. To train soldiers in the procedures of preparing guns (mortars) and ammunitions for firing.

Subjects and Allocation of Time

Subject Number	Title	Hours			
		For Gunners			
		Artillery KUBUNDAE		Mortar KUBUNDAE	
		First Phase	Second Phase	First Phase	Second Phase
8	Preparation of Gun for March and Fire	16	16	—	—
9	Disassembly and Assembly of Mortar for March and Fire	—	—	16	16
10	Preparation of Ammunition for Fire	10	—	10	—
	Total	26	16	26	16

Subject 8. Preparation of Gun for March and Fire

Lesson 1. Preparation of artillery or march; purpose and procedures of inspecting guns prior to march; inspection of tube and breech block; inspection of connections between the tube and counterrecoil rod and recoil mechanism; inspection of the function of elevating and traversing mechanism; inspection of the lower gun carriage, wheel and shock absorber parts and inspection of oil can; ZIP* (spare parts, engineer accessories); inspection of the portable engineer tools in stock or mounted.

Lesson 2. Checking guns during transit on paved and impaved roads; checking guns during fording; preventive maintenance during march.

Lesson 3. Preparation for artillery fire; tools and equipment used in inspection of sights; inspection and adjustment of steering equipment.

Lesson 4. Inspection of the sight for proper function and repair; inspection of equipment for sight alinement.

Lesson 5. Inspection of the function of breechblock and its components; preventive maintenance of breechblock; procedures for determination and elimination of causes of misfire and delayed fire; inspection of the function of the semiautomatic mechanism.

Lesson 6. Inspection of gun prior to firing; inspection of the function of breechblock, elevating and traversing mechanisms, sight and recoil mechanism; inspection of the connections between the tube and counterrecoil rod and recoil mechanism.

Lesson 7. Regulations on conducting designated fires; cooling of the tube between fire; methods of checking the seating of the trail spades to the ground (square timber); elimination of the inclination of KUCHUK* (TN Presumably the drive system.) during the firing period; methods of lubricating gun bore after firing; cleaning gun bore, methods of cleaning and lubricating with cleaning staff.

Subject 9. Disassembly and Assembly of Mortar for March and Fire

Lesson 1. Preparation of mortar for march and checking during march; purpose and procedure of inspecting mortars prior to march; inspection of wheels and limber prior to march and during march; methods of inspecting mortars for proper mounting to the carriage; installation of ZIP* and portable engineer tools; checking the connection of the lunette to the pintle of the limber.

Lesson 2. Preparation of mortar for firing; tools and accessories used in inspecting sight; preparation for inspection of mortars and sights; testing and repair of sights.

Lesson 3. Procedure for adjusting mortar sights; sight setting; laying the mortar for direction and elevation.

Lesson 4. Firing mechanism troubles and repair; replacement or cleaning of firing pin; replacement of a striker spring.

Lesson 5. Bipod mount troubles and repair.

Lesson 6. Cleaning and inspection of the barrel, base plate, elevating and traversing mechanism and buffer prior to firing; inspection of sight and mounting to the traversing gear; inspection of the level; checking the play in elevating and traversing mechanism and the sight.

Lesson 7. Check of sight, level, the gun barrel mount elevating and traversing mechanism, the function of the buffer, the angle of the base plate to the ground and its stability during fire; correction of defects; check of operation of mortar; cleaning mortars after fire.

Lesson 8. Firing regulations; cooling of a gun barrel between fire; prevention of double loading; lubrication of gun bore after fire; cleaning the mortar, use of cleaning staff, cleaning and lubrication.

Subject 10. Preparation of Ammunition for Fire

Lesson 1. Markings on shells (mortar shells) and powder; markings for lot number and weight of shell; color of shells (mortar shells); marking and titles on shells and shell cases; markings on the wrappings and boxes.

Lesson 2. Packing and transportation of ammunition; unloading of ammunition; preparation of ammunition storage in a fire position; classification of ammunition.

Lesson 3. Preparation of ammunition for firing and safety measures; handling of unused ammunition after firing; disposal of duds.

Lesson 4. Organization and procedures for conducting trial operation; final loading of shells (mortar shells) and replacement of fuses; methods of removing rust and refinishing worn spots; replacement of detonators (ignition powder).

Sighting and Fire Control Equipment

(For reconnaissance troops)

First Phase

Purpose of training: To improve the soldiers' skill in the use of various equipment under field combat conditions.

Subject 11. Use of Aiming Circle in Fire Positions and Observation Posts — 6 hours

Lesson 1. Use of aiming circle in fire position; determination of the azimuth (angle of traverse) (target direction, directions of reference points, etc.); laying the base piece of battery (mortar company) by azimuth.

Veteran soldiers will be given supplementary training in methods of determining the target azimuth for artillery (mortar) fire.

Lesson 2. Methods of determining the base line of a gun (mortar) before arrival at fire position.

Veteran soldiers will be given supplementary training in methods of preparing the area in front of the fire positions.

Lesson 3. Use of aiming circle in observation post; determination of target azimuth (reference points); determination of the angle of site.

Veteran soldiers will be given supplementary training in methods of determining the deflection.

Firing Duty

Purpose of training:

1. To train soldiers to fill any position of the gun (mortar) crew
2. To improve the efficiency of a gun (mortar) platoon
3. To train batteries (mortar company) to perform various firing duties

Subjects and Allocation of Time

Subject Number	Title	Hours											
		For Crew											
		Battalion Gun			Battalion Mortar			Regimental Gun			Regimental Mortar		
		Phases											
		1	2	3	1	2	3	1	2	3	1	2	3
7	Firing by and Batteries (Mortar Companies) from Open Fire Positions	35	31	47	10	8	-	35	31	47	10	-	-
8	Firing by Batteries (Mortar Companies) from Covered Fire Positions	-	-	-	25	23	47	-	-	-	25		
	Total	35	31	47	35	31	47	35	31	47	35	31	47

Subject 7. Firing by Platoons and Batteries (Mortar Companies) from Open Fire Positions

For artillery KUBUNDAE crew

Lesson 1. Preparatory training of a platoon; preparation of firing data on moving tanks.

Veteran soldiers will be given supplementary training in methods of selecting the reference points and making antitank firing plan.

Lesson 2. Selection of the moment for opening fire at tanks moving in the direction of the fire position, selection of targets and determination of the moment for opening fire; firing at tanks.

Lesson 3. Firing at tanks moving parallel to the front; methods of leading the targets; determination of the moment for opening fire; correction of firing direction and distance.

Lesson 4. Firing at tanks moving parallel to the front.

Lesson 5. Firing at a group of tanks; taking up fire position; target designation; fire control signals; execution of firing orders against tank group; procedures for annihilating tanks; concentration of platoon fire at a target; shifting concentrated fire from one target to another.

Lesson 6. Firing by batteries (platoons) at tank group; establishment of mission for each gun and platoon; target designation; fire control signals; firing at tanks; shifting platoon and battery fire and concentrated fire; repulsion of repeated attacks by tanks.

Lesson 7. Firing at embrasures of defense installation; selection of fire positions; laying the gun; preparation of firing data; order of conducting fire; methods of correcting fire by sensing.

Lesson 8. Conducting TOT'AN* fire; firing conditions; fuse setting; firing procedures the command "fire" and procedure for firing; observation of bursts and sensing by range, deviation and height of a target.

Lesson 9. Firing at wide stationary targets in a sheaf determined by the target width.

For the crews of artillery and mortar KUBUNDAE

Lesson 10. Firing during defense; commands and procedures for firing; determination of time for opening fire; conducting fire with high explosive shells; conducting fire with short crew while certain members of the crew conduct individual weapon fire simultaneously.

Lesson 11. Preparation for fire in an open fire position during night; preparation of fire position; preparation of reference point, and illuminated aiming stakes during night; planning illumination of targets.

Lesson 12. Firing at night at stationary targets; types of fire at targets disclosed by flare and at illuminated and unilluminated targets.

Lesson 13. Firing at night at moving targets; target designation; movement of targets; determination of directions and speed of movement; planning illumination of targets; determination of time for opening fire; procedures of firing.

Subject 8. Firing by Batteries (Mortar Companies) from Covered Fire Positions

Lesson 1. Establishment of fire position; combat preparation by battery (mortar company).

Veteran soldiers will be given training in methods of preparing the areas in front of battery (mortar company) and selection of cover for towing equipment.

Lesson 2. Methods of giving base point line to base mortar by P'OGAN*; preparation for traversing fire; formation of parallel sheaf by "mutual orientation."

Lesson 3. Formation of parallel sheaf by azimuth, distant check point and "celestial bodies."

Veteran soldiers will be given supplementary training in the use of aiming circle to form parallel sheaf.

Lesson 4. General concept on minimum rear sight setting; determination of the distance to the ridge where there is a shelter; methods of measuring a blind angle with the graduation of a goniometer by using a binocular (compass); methods of calculating the height of a shelter in meters; methods of determining the distance between a shelter and a fire position.

Lesson 5. Conducting battery (mortar company) fire at stationary targets; preparing fire position; preparation for fire; procedures for conducting adjustment fire and fire for effect; procedures for conducting

preparatory fire, rapid fire, "systematic fire" and volley fire; shifting from one form of sheaf to another; suspension of fire; records of firing results in adjustment fire; repeat fire at registered targets.

Lesson 6. Conducting area fire; procedures for conducting concentrated fire; fire command; conducting rapid fire; systematic fire and volley fire; conducting fire in one direction or different directions at different rear sight settings.

Lesson 7. Conducting standing barrage fire; preparation of ammunition for NZO* (TN Standing barrage.); methods of recording the settings on the shield; procedure for conducting fire at NZO area; shifting fire from one area to another.

Lesson 8. Conducting fire at boundary lines; methods of preparing ammunition and methods of dispositioning them along the boundary line; fire command (signal) for commencing fire, commands for shifting fire and suspending fire.

Lesson 9. Conducting night fire; preparing fire positions for night fire; establishment of illuminated aiming stakes and illuminated alternate aiming stakes; preparation of equipment for illumination; conducting fire at stationary and moving targets; shifting from the base aiming stake to alternate aiming stake.

Artillery Fire Training

Purpose of training:

1. To train observers in preparation initial fire data and methods of conducting adjustment fire for guns (mortars) at stationary targets by sensing.

2. To train soldiers in the simple methods of preparing initial fire data.

Subject and Allocation of Time

Subject Number	Title	Hours		
		Observers		
		Phases		
		1	2	3
10	Preparation of Firing Data by Estimation and Firing at Stationary and Moving Targets	8	24	47
11	Rapid Preparation of Initial Firing Data	5	5	-
	Total	13	29	47

Subject 10. Preparation of Firing Data by Estimation and Firing at Stationary and Moving Targets

Lesson 1. Firing from an open fire position at stationary targets; target designation; preparation of initial firing data selection of base point; command for commencing fire; procedures for adjusting fire and fire for effect.

Lesson 2. Firing from an open fire position at moving targets; general concept of maximum distance; fundamentals of direct fire; various types of moving targets; the amount of lead and methods of determination; PU'ANG* CHONRYUN*; determination of azimuth and rear sight setting; command for commencing fire; procedures for conducting fire; indications of target for destruction.

Lesson 3. Preparation of initial firing data by estimation for firing by angles of traverse; procedures for determining the angle of traverse and recording the data prior to assignment of fire mission.

Lesson 4. Procedures for determining the angles of traverse and recording the data after the mission is assigned.

Lesson 5. Mission and determination of the distance coefficient and the parallel correction; recording the distance coefficient and the parallel correction; application of distance coefficient and parallel correction.

Lesson 6. Purpose and contents of the firing chart; determining the desired data.

Lesson 7. Firing at a permanent pillbox (registration point) from covered fire position by observation of bursts; procedures for adjustment fire; methods of bracketing a target and methods of ensuring accuracy; general concept of a covered CHO*; fire for effect; procedure of transmitting orders; record of firing.

Lesson 9. Preparation of firing data at stationary targets by sensing; practice in conducting adjustment fire.

Subject 11. Rapid Preparation of Initial Firing Data

Lesson 1. Conditions under which rapid preparation of the initial firing data is made; use of map (plotting board) until firing mission is received.

Lesson 2. Use of map (plotting board) after receiving fire mission. Method of entering a target point in a map (plotting board) and methods of determining the differences in elevation of a target from observation post and fire position based on the map; determination of the fire direction and range.

Veteran soldiers will be given supplementary training in methods of determining the target azimuth and rear sight setting.

Lesson 3. Methods of determining the geographical azimuth, grid azimuth and magnetic deviation by a map (plotting board); determination of the initial magnetic angle of fire; determination of the target azimuth and range correction; methods of calculating the initial lay for launching fire based on meteorological correction.

Veteran soldiers will be given supplementary training in methods of correcting the azimuth and methods of determining the initial azimuth for fire based on correction of a magnetic angle.

Lesson 4. Daily report on "the meteorological fire;" the significance of daily reports; preparation of the forms for computating the correction; methods of making entries in the forms for meteorological correction; methods of calculating the total meteorological correction.

II. Self-Propelled Gun KUBUNDAE

Technical Training

Purpose of training:

1. To train the crew in skilful operation of vehicles for constant combat readiness.

2. To train the crew in the procedure of skilful technical inspection, evacuation and repair of vehicles under field conditions.

Subjects and Allocation of Time

Subject Number	Title	Hours			Duration of Motor Operation (minutes) per crew (study team)
		For the Crew	Training by Speciality		
			Self-propelled gun commander	Drivers	
	First Phase				
21	Preparation of Self-Propelled Guns for Fording	4	-	-	30
22	Evacuation of Submerged or Damaged Self-Propelled Guns	4	-	-	15
23	Maintenance Equipment for Self-Propelled Guns	-	-	2	-
24	Maintenance of Power Transmission System and Drive Section	-	-	10	10
25	Repair of Self-Propelled Guns by the PUDAE	-	-	12	-
	Total	8	-	24	55
	Second Phase				
26	The Second Technical Inspection of Self-Propelled Guns	10	-	-	15
27	Troubles in the Electrical System	-	2	-	-

Subjects and Allocation of Time (Cont'd)

Subject Number	Title	Hours			Duration of Motor Operation (minutes) per crew (study team)
		For the Crew	Training by Speciality		
			Self-propelled gun commander	Drivers	
28	Troubles in the Power Transmission System and Drive Section	-	2	-	-
29	Fundamentals of Assembling the Chassis	-	-	6	-
	Total	10	4	6	15
	Third Phase				
29	Fundamentals of Assembling the Chassis	-	-	18	-
30	Repair of Self-Propelled Guns under the Field Conditions	-	-	18	-
	Total	-	-	36	-
	Grand Total	18	4	66	70

First Phase

Subject 21. Preparation of Self-Propelled Guns for Fording

Procedures for preparation of self-propelled guns for fording; self-propelled gun equipment for fording at points deeper than normal; fording demonstration.

Subject 22. Evacuation of Submerged or Damaged Self-Propelled Guns

Methods of removing undamaged self-propelled guns from shell-craters, ditches and swamps by utilizing available equipment; preparation for removal of damaged self-propelled guns and towing self-propelled guns when the drive section is damaged.

Subject 23. Maintenance Equipment for Self-Propelled Guns

Mobile repair shop, its mission and use; setting up mobile repair shop for maintenance of self-propelled guns; maintaining and stocking supplies; setting up lubrication equipment and spare parts of the vehicle; structure and use of washing equipment and equipment for cleaning the vehicle.

Subject 24. Maintenance of Power Transmission System and Drive Section

Lesson 1. Maintenance procedures for power transmission system, electrical steering transmission equipment and various components of the drive section in spot checks, daily maintenance, first technical inspection and second technical inspection; inspection procedures for checking adjustment and mountings of components and various equipments; lubrication procedures and procedures for changing oil.

Lesson 2. (Actual work) Maintenance of the power transmission system and drive section during the second technical inspection.

Subject 25. Repair of Self-Propelled Guns by the PUDAE*

Lesson 1. Classification of repair of self-propelled guns; conditions under which self-propelled guns are repaired; types of repair conducted by PUDAE and YONHOP PUDAE personnel; types of repair conducted outside the PUDAE; reasons for sending vehicles to the repair shop; type and scope of repair activities conducted by the engineer maintenance team with its own equipment and with the repaired and rehabilitated equipment of the KUBUNDAE and PUDAE; drivers' duties during repair of vehicle; maintenance of records of repair activities by the PUDAE.

Lesson 2. Maintenance equipment of the PUDAE; Missions of the repaired A and B type tanks and the possibilities of overhauling; knowledge of mechanics tools and equipment at the repair shop.

Lesson 3. Preparations for repair of self-propelled guns; cleaning of external and internal parts of a vehicle; methods of removing ammunitions and ZIP*; methods of draining water, fuel and lubrication oil from components; methods of preparing vehicle for repair at the repair site; installation of equipment for assembly and preparation of platform and shelter; preparation for disassembly of each components and equipment.

Second Phase

Subject 26. The Second Technical Inspection of Self-Propelled Guns

Lesson 1. The second technical inspection procedure for self-propelled guns; purpose and schedule of technical inspections; the schedule, work and procedure for the second technical inspection; duties of the crew during technical inspections; tools used in technical inspections

Lesson 2. (Actual operations) Maintenance within the scope of second technical inspection.

Subject 27. Troubles in the Electrical System

Inspection of functions of each component and equipment of the electrical system; procedures for detecting troubles in the electrical equipment; troubles in the basic components and equipment of the electrical system such as battery, generator, starter, electric signals and lights; causes of troubles and methods of repair.

Subject 28. Troubles in the Power Transmission System and Drive Section

Common troubles in the electrical steering apparatus of the main clutch, transmission, steering and power transmission systems troubles of the side electrical drive and main drive section; causes of troubles and methods of repair.

Third Phase

Subject 29. Fundamentals of Assembling the Chassis

Note: The study of this subject will begin in the second phase.

Lesson 1. Materials and equipment used in repair and maintenance of vehicle; methods of utilizing equipments in repair and maintenance of a vehicle.

Lesson 2. (Actual work) Methods of conducting minor chassis repair; methods of heating parts of chassis for repair.

Lesson 3. (Actual work) Materials and equipment used in welding; basic methods of welding with hard and soft lead; welding of tubes and cylinder.

Lesson 4. (Actual work) Methods of cutting metal with chisel and hacksaw; sawing; boring; methods of making bolts, nuts and stud holes.

Lesson 5. Regulations on disassembly and assembly of components and equipment; regulations on use of assembly tools; methods of removing the standard bolt in locations where tool-handling is difficult.

Lesson 6. (Actual work) Disassembly and assembly of components and equipment; inspection for proper assembly of components and equipment.

Subject 30. Repair of Self-Propelled Guns under Field Conditions

Lesson 1. Common damages to vehicle in combat; damages to the body, main drive, engine, power transmission system and electrical system; methods of making temporary repairs by the crew using ZIP* for transportation under field conditions.

Lesson 2. (Actual work) Making minor repairs to vehicles under field conditions; replacement of track; replacement of road wheels; replacement of idler wheel control arm; eliminating leakage of fuel, lubricating oil and coolant.

Operation of Vehicle

Purpose of training:

To train vehicle commanders and operators to operate vehicles at high speed under all types of conditions.

Subjects and Allocation of Time

Subject Number	Title	Hours		Duration of a Motor Operation per Student (Motor-Minutes)*
		For Self-Propelled Gun Commander	For Drivers	
	First Phase			
10	Overcoming Obstacles and Antitank Barriers through Restricted Passages	-	10	-/40
11	Operation of Vehicle to Overcome River Obstacles	-	8	-/40
12	Methods of Operating Vehicles at Maximum Speed in a Designated Direction in Isolated Areas	4	8	30/40
13	Operation of Vehicle during Fire at Halt	-	4	-/40
	Total	4	30	30/180
	Second Phase			
14	Overcoming Obstacle and Antitank Barrier in Restricted Passages	-	12	-/60
15	Methods of Operating Vehicles at Maximum Speed in a Designated Direction in Isolated Areas	-	8	-/40
16	Operation of Vehicle during March	-	6	-/60
17	Operation of Vehicle to Support Infantry Charges	-	4	-/60
	Total	-	30	-/220
	Third Phase			
	Improving Driving Skill	-	10	-/80
	Total	-	10	-/80
	Grand Total	4	70	30/480

*Numerator denotes duration of motor operation for vehicle commanders; denominators denotes duration of motor operation for drivers.

First Phase

Subject 10. Overcoming Obstacles and Antitank Barriers in Restricted Passages

Lesson 1. Study of regulations on overcoming obstacles and antitank barriers in restricted passages.

Lesson 2. (Combined lesson) Operation of self-propelled gun.

Subject 11. Operation of Vehicle to Overcome River Obstacles

This subject is the same as Subject 9 of winter training.

Subject 12. Methods of Operating Vehicle at Maximum Speed in a Designated Direction in Isolated Areas

Lesson 1. Study of regulations on operation of vehicle at maximum speed in a designated direction in isolated areas.

Lesson 2. (Combined lesson) Operation of self-propelled gun.

Subject 13. Operation of Vehicle during Fire at Halt

Lesson 1. Study of vehicle operation during fire at momentary halt.

Lesson 2. Operation of self-propelled gun during fire at momentary halt.

Second Phase

Subject 14. Overcoming Obstacles and Antitank Barriers in a Restricted Passages

Lesson 1. Study of regulations on overcoming obstacles and antitank barriers in restricted passages.

Lesson 2. (Combined lesson) Operation of self-propelled gun.

Subject 15. Methods of Operating Vehicle at Maximum Speed in a Designated Direction in Isolated Areas

Lesson 1. Study of regulations on operation of a vehicle at maximum speed in a designated direction in isolated areas.

Lesson 2. (Combined lesson) Operation of self-propelled gun

Subject 16. Operation of Vehicle during March

This subject is the same as Subject 7 of winter training.

Subject 17. Operation of Vehicle to Support Infantry Charges

This subject is the same as Subject 8 of winter training.

III. Engineer KUBUNDAE

Purpose of training:

To train engineer KUBUNDAE to support the infantry in the following operations:

1. To establish positions between defense areas.

2. To construct roads and bridges.

3. To establish river crossing points with available and assigned river crossing equipment.

4. To establish remote controlled barriers and water supply center.

Subjects and Allocation of Time

Subject Number	Title	Hour		
		First Phase	Second Phase	Third Phase
	Military Engineering for Field Operations			
31	Establishment of Command Posts	32	-	-
32	Covered Fire Positions	16	-	-
33	Establishment of Dummy Positions and Equipment	-	9	-
	Total	48	9	-
	Military Roads			
34	Construction of Roads through Swamps	16	-	-
35	Camouflage of Roads and Cross-Country Roads	-	8	-
	Total	16	8	-
	Military Bridges and River-Crossing Points			
36	Reconnaissance and Forced River-Crossing	17	5	-
37	Construction of Short Wooden Bridges	-	12	-
38	Erecting Bridges with Prefabricated Parts	-	-	5
	Total	17	17	5
	Demolition			
39	Demolition of Weapons Equipment and Positions	9	5	-
	Total	9	5	-

Subjects and Allocation of Time (Cont'd)

Subject Number	Title	Hour		
		First Phase	Second Phase	Third Phase
	Laying and Neutralization of Mines			
40	Opening Passages through Mine Fields by Ordinary Slow Burning Fuse and Charges	8	8	-
41	Remote-Controlled Mines and Mine Fields	-	-	20
	Total	8	8	20
	Water Supply for Field Operations			
42	Reconnaissance for Water Supply and Storage	6	-	-
43	Shallow Well	-	8	-
44	Establishment and Operation of Water Supply Center	-	-	8
	Total	6	8	8
	Engineer Tactical Training			
45	Missions of Obstacle-Clearing Team in Making Passages through Enemy Barriers	12	-	-
46	Missions of an Engineer Platoon to Ensure Artillery Mission during Offense	-	8	-
47	Missions of an Engineer Platoon to Support Tanks during Offense	-	-	8
48	Missions of an Engineer Company to Strengthen the Boundaries of the Area Occupied by Friendly Forces	-	-	12
	Participation in the General Arms Tactical Maneuvers on Subjects 27, 29, 30 and 31	-	44	84
	Total	12	52	104
	Grand Total	116	107	137

Subject 31. Establishment of Command Posts

Note: Veteran soldiers will be given supplementary training in supervising the operation in Lessons 2, 3 and 4.

Lesson 1. Manufacture of structural members and struts; manufacture of frames for doors, and windows and stove doors; manufacture of paper-pane windows and shutters.

Veteran soldiers will be given supplementary training in methods of drawing sketches of joints.

Lesson 2. Planning and construction of the command post in the field; digging the foundations of fortifications; camouflage procedures during construction.

Lesson 3. Establishment of an observation post; camouflaging of an observation post with assigned and available equipment; camouflage during the construction.

Lesson 4. Assembly of the command post with prefabricated parts; camouflage during construction.

Subject 32. Covered Fire Positions

Lesson 1. Different types of covered machine gun fortifications, ie, dirt fortifications, dirt-and-timber fortifications, permanent fortifications and "earth-mound" fortifications; general knowledge of fire positions and their requirements.

Lesson 2. Structure and camouflage of covered dirt-and-timber machine gun positions; basic size; preparation of materials; structure of fire positions; construction and camouflage; camouflage during construction.

Subject 33. Establishment of Dummy Positions and Equipment

Note: Veteran soldiers will be given supplementary training in supervision of operations in each lesson of this subject.

Lesson 1. Purpose of dummy positions, its disposition in the field and requirement; methods of converting the surface objects into fire positions.

Lesson 2. Establishment of dummy trenches, intrenchment, dirt-and-timber fortifications, observation posts, barriers, roads and buildings; establishment of dummy equipment.

Subject 34. Construction of Roads through Swamps

Lesson 1. Reconnaissance of swamps, selection of site and type of roads; preparation for laying the foundation; methods of spreading branches, twigs, sticks and logs as cover.

Veteran soldiers will be given supplementary training in methods of making entries in reconnaissance log and methods of measuring the angle of turn.

Lesson 2. Methods of constructing foot paths with logs and boards.

Subject 35. Camouflage of Roads and Cross-Country Roads

Lesson 1. Vertical masks; camouflaged fences, and masks on the road; construction of vertical masks and camouflaged fence.

Veteran soldiers will be given supplementary training in methods of determining the site and height of vertical mask.

Lesson 2. Structure and construction of masks on the road.

Subject 36. Reconnaissance and Forced River-Crossing

Lesson 1. Measurement of width and depth of a river, determination of type of river bed and banks and determination of flow velocity.

Veteran soldiers will be given supplementary training in methods of determining the strength of earthworks and available materials for establishing a river-crossing point and methods of drawing rough sketches of the river-crossing point.

Lesson 2. Determination of the possibilities of fording by external appearance; construction of crossing point; duties of personnel in fording operation and for internal security, duties of the guides and rescue unit; fording by infantry, artillery, motor vehicles and tanks.

Lesson 3. Selection of site for river crossing by swimming; construction of river-crossing point; preparation of available equipment for swimming; river-crossing by swimming with available equipment.

Lesson 4. Selection and construction for landings of river-crossing point; making rafts with available equipment for river-crossing of KUBUNDAE and equipment.

Veteran soldiers will be given supplementary training in methods of determining permissible load of various river-crossing equipment.

Lesson 5. Methods of laying rope across rivers; methods of crossing river with rafts made of available equipment and landing on the opposite bank.

Lesson 6. Tactical-technical capabilities of motor boats (outboard engine) and care of basic parts and motor boat (outboard engine), and preparation for operation; actual operation of motor boats (outboard engine).

Lesson 7. Purposes of assigned river-crossing equipment and basic tactical-technical data; equipment preparation and for river-crossing; techniques loading soldiers and equipment aboard assigned river-crossing equipment and river-crossing with river-crossing equipment; practice in steering motor boats with oars.

Lesson 8. Construction of river-crossing point for ferry; construction of ferries with assigned river-crossing equipment; methods of loading on and unloading from ferries equipment and combat technical equipment; crossing river obstacles in ferries by means of oars, ropes and aid of motor boats.

Subject 37. Construction of Short Wooden Bridges

Assembly of materials for bridges; construction of the inner wooden foundation, longitudinal timber and floating boards, mounting the tracks and construction of railing.

Veteran soldiers will be given supplementary training in determining the locations of bridge axis and piers and supervision of operation.

Subject 38. Erecting Bridge with Prefabricated Parts

The structure of a railway bridge; erecting railway bridges; internal security duties and directing passage of transportation equipment, tanks and motor vehicles over the bridge.

Subject 39. Demolition of Weapons, Equipment and Positions

Note: Veteran soldiers will be given supplementary training in determining the amount and types of charges, and the way they are used in each lesson of this subject.

Lesson 1. Destruction of timber, and piles of bridges by strapped charges and imbedded charges; demolition of square timber; demolition of piles in the water and wooden bridges.

Lesson 2. Methods of loading slow burning powder; installing the charges and demolition of wire entanglement.

Lesson 3. Demolition of tanks, motor vehicles, tractors, aircraft guns, shells and bombs.

Lesson 4. Demolition of dirt-and-timber fortifications, ferro-concrete fortifications, armor cover and ferro-concrete, stone and iron antitank obstacles; methods of making passages through the embankments of antitank ditches.

Subject 40. Opening Passages through Mine Field with Slow-Burning Fuse and Charges

Organization and equipment of teams to remove barrier and to open passages; guard duties; methods of transporting slow-burning fuse and charges; exploding the charges; passage markers.

Subject 41. Remote-Controlled Mines and Mine Fields

Lesson 1. Simple methods (methods of playing mines under moving tanks, mine KWANMOK*) of controlling individual mine and mine fields; use of mechanical demolition.

Lesson 2. Mission, structure and principles of an electric and mechanical switches, disconnecting switches, power source and control panel; guard duties and laying mine fields.

Lesson 3. Laying of antipersonnel mines for demolition and blockade purposes laying remote controlled antipersonnel mine field and guard duties during the laying of mine fields.

Subject 42. Reconnaissance for Water Supply and Storage

Lesson 1. Surface water and underground water; army water requirements; water consumption standard organization, equipment and missions of water supply reconnaissance team.

Veteran soldiers will be given supplementary training in making reconnaissance reports of watersheds.

Lesson 2. Making water purification systems with available equipment; assigned portable water purification equipment, filtration and decontamination; methods of storing water using assigned and available equipment; guarding watershed.

Subject 43. Shallow Well

Structure of a shallow well; making and installing well-frame; installation of cover and lock; installation of pumping equipment; cleaning and decontamination of existing wells.

Subject 44. Establishment and Operation of a Water Supply Center

Note: Veteran soldiers will be given supplementary training in supervision of construction and maintenance of wells and water supply center.

Water supply center and its mission; methods of establishing a water supply center at springs, open reservoirs and shallow wells; duties of the personnel working at a water supply center; water supply procedure.

Subject 45. Missions of Obstacle-Clearing Teams in Making Passages through Enemy Barriers

Study of enemy barriers and selection of site for the passage; squad combat order during approach to enemy mine field; establishment of passage through mine fields and other barriers and passage markers; delivery of signs to complete the establishment of passages and dispatching of reports; internal security duties and guarding of passages.

Subject 46. Missions of an Engineer Platoon to Ensure Artillery Missions during Offense

Reconnaissance and construction of roads and cross-country roads; passage of artillery through trenches, and passages through mine fields, antitank ditches and natural obstacles; neutralization of mines and engineer support in construction of fire positions during combat against enemy defense in depth; protection of fire positions with mines and explosive barriers.

Subject 47. Missions of Engineer Platoon to Support Tanks during Offense

Reconnaissance of cross-country roads from the line of departure to the passage in the barrier, selection of road, establishing road markers and passing the tanks through the passage; missions of the engineers to ensure the actions of tanks in defense in depth.

Subject 48. Missions of the Engineer Company to Strengthen the Boundaries of the Area Occupied by Friendly Forces

The position of a company within infantry combat order to strengthen defense of terrain; communications and coordination between infantry and artillery KUBUNDAE; preparation of the boundary lines for laying mines; laying mines; removing mines from the boundary lines which have lost their significance and shifting the mines to new boundary lines.

IV. Communication KUBUNDAE, and Signal Troops in Artillery and Mortar KUBUNDAE

Training of Telephone Men

Purpose of training:

To train telephone men to be efficient members of the insulated telephone line KUBUNDAE and central telephone platoons.

Subjects and Allocation of Time

Subject Number	Title	Hour								
		For Communication Platoons			For the Communication Company			For Telephone Men in Artillery and Mortar KUBUNDAE		
		Phases								
		1	2	3	1	2	3	1	2	3
	Telephony									
34	Structure and Maintenance of Assigned Switchboards	14	–	–	14	–	–	–	–	–
35	Passage of Electric Current in Theoretical Operation of Switchboard and Circuit	–	6	–	–	6	–	–	–	–
36	Trouble-Shooting the Telephone (Switchboard)	–	9	6	–	16	–	16	–	–
	Total	14	15	6	14	22	–	16	–	–
37	Duties at a Telephone Station Establishment of Central Telephone Station and Maintenance Practice	30	–	–	16	16	–	–	–	–
	Total	30	–	–	16	12	–	–	–	–
	Wiring									
38	Repair of Insulated Outdoor Telephone Lines	8	–	–	8	–	–	8	–	–
39	Wiring Insulated Outdoor Telephone Lines, Maintenance of Telephone Station and Maintenance Practice	46	16	31	28*	29	37	26	37	33

Subjects and Allocation of Time (Cont'd)

Subject Number	Title	Hour								
		For Communication Platoons			For the Communication Company			For Telephone Men in Artillery and Mortar KUBUNDAE		
		Phases								
		1	2	3	1	2	3	1	2	3
40	Main and Permanent Aerial Telephone Cables	-	-	8	-	-	8	-	-	8
	Total	54	16	39	36	29	45	34	37	41
*Six hours will be allocated to Subject 12 of formation training.										
41	Radio-Telephone Operation	10	-	-	10	-	-	6	10	12
	Total	10	-	-	10	-	-	6	10	12
	Special Tactical Training									
42	Operations to Ensure Communications by the Communication KUBUNDAE during Offense	8	-	8	8	-	8	-	-	-
43	Operations to Ensure Communications by the Communication KUBUNDAE during Defense	-	8	-	-	8	-	-	-	-
	Participation in the Command Staff Maneuver	-	-	-	32	-	-	-	-	-
	Participation in the General Arms Tactical Maneuver on Subjects 27, 28, 29, 30 and 31	-	60	84	-	24	84	-	-	-
	Total	8	68	92	40	32	92	-	-	-
	Grand Total	116	99	137	116	99	137	56	47	53

Note: Telephone men in the artillery and mortar KUBUNDAE will study special problems in combined tactical and KUBUNDAE Training.

Subject 34. Structure and Maintenance of Assigned Switchboards

Lesson 1. Purpose of a switchboard; mission and organization of the central telephone station; principles of switchboard operation; tactical-technical capabilities and general structure of switchboards.

Lesson 2. Components of a switchboard, their purpose and arrangement; structure and purpose of the indicator, connecting lines and jacks.

Lesson 3. Installating switchboards and connecting telephone lines; procedure of switchboard maintenance.

Lesson 4. Switchboard operation.

Lesson 5. Deployment of switchboards and maintenance practice; care and protection of switchboards.

Subject 35. Passage of Electric Current in Theoretical Operation of Switchboard and Circuit

Study of a theoretical operation of switchboard; studying functions of various parts by theoretical passage of electric current through switchboard circuit.

Veteran soldiers will be given supplementary training in switchboard operation with theoretical electric current and wiring diagram of the switchboard.

Subject 36. Trouble-Shooting the Telephone (Switchboard)

Signs of trouble in various parts of a telephone (switchboard) and signs of troubles in the theoretical operation revealed during the general inspection; methods of inspecting the circuit in theoretical operation; repair.

Veteran soldiers will be given supplementary training in methods of trouble-shooting telephones (switchboards).

Subject 37. Establishment of Central Telephone Station and Maintenance Practice

Note: Veteran soldiers will be given supplementary training in performing unit leader's duties in supervision of lessons in this subject.

Lesson 1. Establishment of internal communications at the command post (observation post); establishment of subscribers' terminal telephone station; evacuation of telephone wires.

Lesson 2. Assignment of personnel to shelter construction unit of the central telephone station and establishment of duties for the unit; digging and establishment of a shelter under field conditions.

Lesson 3. Methods of laying communication lines into the central telephone station and methods of leading-in communication lines to the central telephone station; devices for leading-in insulated outdoor communication line and insulated lead-in; splicing insulated lead-in wires; laying insulated lead-in wires into a trench or telephone stations; methods of leading-in subscribers' telephone lines into the central telephone station and methods of leading-in a direct telephone line into the central telephone station; installation of ground wires.

Lesson 4. Installation and maintenance of lines in buildings and covered trenches (entrenchment); wiring at field stations by using terminal boards, clips and plugs; installation of ground wire on various kinds of soil.

Lesson 5. Establishment of central telephone station in a covered trench and internal communications in a command post (observation post); preparation for installing equipment in a covered shelter; installation of switchboard for a unit, installation of wires within the station; installing telephone wires at telephone station; establishment of subscriber's telephone station; operation of a telephone station.

Lesson 6. Lesson 5 conducted at night.

Lesson 7. Installation of central telephone station within a building and installation of the internal communications in a command post (observation post); establishment of central telephone station of a unit; installation of a switchboard; installation of internal communication line in a residential area and establishment of the subscribers' telephone station within a building.

Subject 38. Repair of Insulated Outdoor Telephone Lines

Drying and cleaning insulated wires; testing splices and insulation; establishment of connecting points for the unit; ASSUKKIRITTU* insulation for insulation of wires.

Subject 39. Wiring Insulated Outdoor Telephone Lines, Maintenance of Telephone Station and Maintenance Practice

Lesson 1. Methods of wiring insulated wire in summer.

Lesson 2 to 9, inclusive.

The contents are the same as Lessons 2, 5, 6, 7, 8, 9, 10 and 11 of Subject 32 of Winter Training Period for day, night and under enemy fire.

(TN Lessons 10 and 11 missing from original document.)

Lesson 12. Laying insulated wire through swamps.

Lesson 13. Methods of laying insulated telephone lines across rivers; securing insulated wires on river banks; methods of attaching weight to insulated wires and methods of laying insulated wire in the water; securing insulated wire on the opposite bank.

Subject 40. Main and Permanent Aerial Telephone Cables

Lesson 1. Application, mission and tactical-technical capabilities of the main and permanent aerial telephone cables; materials used in the installation of main and permanent aerial telephone cables.

Lesson 2. Splicing bare communication wires; methods of splicing bare communication wires to insulated telephone wires; details of the splices between the main and permanent aerial telephone cables and the insulated telephone wires.

Subject 41. Radio-Telephone Operations

Lesson 1. Radio data (wave lengths, call signs and codes) and operating regulations; deployment of radios, preparation for operation, tuning and communication control by telephone.

Lesson 2. Practice in radio deployment and tuning; exchange of messages by short radio telegrams and telephone codes.

Lesson 3. Radio operations during halt and during movement; operating procedures at point protruding into enemy position.

Subject 42. Operations to Ensure Communications by Communication KUBUNDAE during Offense

Lesson 1. Organization of communications in the area of offense; establishment of communication center at the command post (observation post); laying telephone lines on the basis of communication axis and direction; disposition of radios at a command post (observation post); laying communication lines behind an attacking KUBUNDAE; shifting of communication center to a new command post (observation post); operation of communication center and lines and preparation for moving them to the next command post (observation post); evacuation of used lines and methods of carrying used communication equipment to the front; communication by mobile equipment.

Lesson 2. The content as the same as Lesson 1 but conducted at night.

Supplementary training will be given in methods of establishing communication axis rapidly and methods of establishing communication for the KUBUNDAE with the communication axis.

Subject 43. Operations to Ensure Communications by the Communication KUBUNDAE during Defense

Organization of wire and radio communication; deployment and establishment of communication center at the command post (observation post); establishment of communication center at a command post (observation post); establishment of communication control station at alternate command post (alternate observation post); laying telephone wires from the base communication center to the alternate communication station in the direction of movement and from the alternate communication center to the base communication center; methods of reestablishing communication quickly when interrupted by enemy action; laying telephone lines in the direction of the countercharge; mobility of communication equipment; organization of communication by radio and mobile equipment.

Training of Radio Operators

Purpose of training:

To improve the skills of radio operators in radio-telephone and radio-telegraph operations and conclude the training of the radio personnel.

Subjects and Allocation of Time

Subject Number	Title	Hour								
		For the Communication Platoon			For the Communication Company			For Artillery KUBUNDAE and Mortar KUBUNDAE		
		Phases								
		1	2	3	1	2	3	1	2	3
	PUDAE Radio									
29	Tuning Radios	6	–	–	6	–	–	6	–	–
30	Utilization of Non-standard Antenna	6	–	–	6	–	–	6	–	–
	Total	12	–	–	12	–	–	12	–	–
	Radio Control Duties									
31	Increase in Receiving and Transmitting Speed up to Seven Items per Minute	10	–	–	10	–	–	24	–	–
32	Increase in Receiving and Transmitting Speed up to Eight Items per Minute and Radio Operation	44	–	–	44	–	–	20	22	–
33	Increasing Receiving Speed up to Ten Items per Minute and Transmitting Speed and Radio Telephone Operations over a Short Distance	42	31	3	10	67	–	–	25	53
34	Receiving up to Eleven Items per Minute and Increasing Transmitting Speed and Radio-Telephone Operations within Its Effective Distance	–	–	42*	–	–	45	–	–	–
	Total	96	31	45	64	67	45	44	47	53

Subjects and Allocation of Time (Cont'd)

Subject Number	Title	Hour								
		For the Communication Platoon			For the Communication Company			For Artillery KUBUNDAE and Mortar KUBUNDAE		
		Phases								
		1	2	3	1	2	3	1	2	3
	Special Tactical Training									
35	Operations by the Communication KUBUNDAE to Ensure Communication for the PUDAE (KUBUNDAE) during Offense	8	–	8	8	–	8	–	–	–
36	Operations by the Communication KUBUNDAE to Ensure Communications for the PUDAE (KUBUNDAE) during Defense	–	8	–	–	8	–	–	–	–
	Participation in the Command Staff Maneuver	–	–	–	32	–	–	–	–	–
	Participation in the General Arms Tactical Maneuver on Subject 27, 28, 29, 30 and 31	–	60	84	–	24	84	–	–	–
	Total	8	68	92	40	32	92	–	–	–
	Grand Total	116	99	137	116	99	137	56	47	53

*Six hours will be allocated for Subject 12 in unit training.

Remarks: 1. When conducting lessons in Subjects 31, 32, 33 and 34, veteran soldiers will increase receiving and transmitting speed to that of radio operator second class and prepare for the radio operator second class qualification examination.

2. Radio operators in the artillery and mortar KUBUNDAE will study special tactical training problems in coordinated and KUBUNDAE training.

Subject 29. Tuning Radios

Lesson 1. Purpose and methods of tuning the radios; base set of the net, tuning radio transmitter to the frequency of the receivers and tuning receivers of the net to the frequency of the transmitter; utilization of the correction data.

Lesson 2. Assigning frequencies to radio sets on basis of stand and frequencies; methods of tuning radio sets to one frequency by zero beat.

Subject 30. Utilization of Nonstandard Antenna

Utilization of nonstandard antenna to increase the operational distance of a radio; preparation and utilization of "CHETTU" antenna," "vertical antenna" and "sky-ward radiation antenna."

Subject 31. Increase in Receiving and Transmitting Speed up to Seven Items per Minute

This subject is the same as Subject 27 of the winter training period for radio operators

Subject 32. Increase in Receiving and Transmitting Speed to Eight Items per Minute and Radio Operation

Lesson 1. Methods of increasing the receiving speed for all types radio telegrams to eight items per minute; methods of transmitting all types of telegrams at the speed of seven items per minute; radio operator's duties at the main radio of a net.

Lesson 2. Methods of receiving all types of radio telegrams at the speed of eight items per minute when radio interference is weak or normal; methods of increasing transmitting speed for all types of radio telegrams up to eight items per minute; transmission for recording; regulations on transferring the operation of a radio set from the net to the communication axis.

Lesson 3. Radio operation; methods of tuning receivers to telegraphic call signals when shifting from one frequency to another; receiving and transmitting codes and radio signals; methods of tuning a receiver to a subscriber's operational in frequency; receiving and transmitting a short radio telegrams.

Lesson 4. Reception when signal strength is weak; continuous receiving and transmitting; exchanging of the radio telegram in letters, numbers or mixed codes within the communication axis; review of all regulations on receiving and transmitting radio messages.

Standards of receiving and transmitting radio messages:

Excellent — 100 items per

Good — 75 items per hour

Fair — 50 items per hour

Lesson 5. Receiving all types radio telegrams through a receiver; two-way exchange and receiving and transmitting radio telegrams in letters, numbers or mixed codes within a net consisting of three transmitter keys.

Standards of receiving and transmitting messages:

Excellent — 125/100 items per hour

Good — 100/75 items per hour

Fair — 75/50 items per hour

Study of methods of receiving and transmitting multiple telegrams; methods of supporting communications between the radios of a net at the time of establishment; methods of sending radio telegrams through an intermediate radio station within the same net.

Remarks: The standards of two-way exchange of messages are designated by the numerators and the standards of operation in the net are designated by the denominators.

Lesson 6. Receiving when the amount of radio interference is normal transmitting all types of sentences and radio telegrams at the speed of eight items per minute; receiving the same telegrams through a receiver; methods of withdrawing radio set from the net for use in the communication axis; relaying radio telegrams; communication control with radios of the adjacent net.

Lesson 7. Receiving when interference is high and determination of the quality of transmission of all types of radio telegrams at the speed of eight items per minute.

Standard:

Excellent — no mistake in the spelling for a telegram consisting of 50 items

Good -- one mistake

Fair — two mistakes

Subject 33. Increasing Receiving Speed up to Ten Items per Minute and Transmitting Speed and Radio-Telephone Operations over a Short Distance

Lesson 1. Increasing receiving speed for all types of radio telegrams up to ten items per minute; increasing transmitting speed for all types of radio telegrams up to nine items per minute.

Lesson 2. Receiving various radio telegrams at the speed of ten items per minute when interference is weak, or normal and the signal strength is weak; receiving telegrams with items consisting of numerical code; transmitting all types of radio telegrams at the speed of nine items per minute; methods of transmitting dictated messages.

Lesson 3. Radio operation; receiving the day's radio work assignment; methods of controlling communication when shifting from one frequency to another; shifting from telegraphic to telephone operation and vice versa; questions and answers regarding cryptogram; exchanging cryptographic messages; regulations on withdrawing radio set from a net for use in the communication axis.

Lesson 4. Receiving all types of radio telegrams at the speed of ten items per minute when interference is strong; increasing transmitting speed for all types of radio telegrams up to ten items per minute; methods of transmitting dictated messages.

Lesson 5. Two-way exchange of messages and exchanging of messages

Standard of receiving and transmitting messages

Excellent — 150/100 items per hour

Good — 125/75 items per hour

Fair — 100/50 items per hour

Receiving and transmitting telegraphic messages by PUDAE; general review of regulations on all radio communications.

Lesson 6. Radio operations in the communication axis; receiving and transmitting all types of radio telegrams; confirming portions of the radio telegrams which was doubtfully received or missed.

Lesson 7. Receiving interference is strong and signal strength is weak; two-way exchange and exchanging of messages within the net.

Standards of receiving and transmitting messages:

Excellent — 175/125 items per hour

Good — 150/100 items per hour

Fair — 125/75 items per hour

Review of regulations on receiving and transmitting all types of radio messages.

Lesson 8. Radio operations based on the receiver frequencies; operations by using axis call signal; questions and answers for confirmation of radio telegrams received; operations without using call signals.

Lesson 9. Receiving when interference exist and determination of the quality of transmission of all types the radio telegrams.

Standard:

Excellent — no mistake in spelling in a message of 100 items

Good — one mistake in spelling

Fair — two mistakes in spelling

Determination of the quality and speed of receiving and transmitting all types of radio telegrams within the communication axis and net.

Standards of receiving and transmitting messages:

Excellent — 225/150 items per hour

Good — 200/125 items per hour

Fair — 150/100 items per hour

Lesson 10. Radio operations in a radio net; communication control; shifting from one frequency to another; methods of adjusting transmitter-subscribers to the frequency of the base receiver; receiving and transmitting multiple telegrams; issuing receipt for multiple radio telegrams; taking over or transferring the function of the base radio.

Lesson 11. Receiving under interference of various degrees of intensity and transmission of all types of radio telegrams at the speed of ten items per minute; two-way exchange of messages and receiving and transmitting messages in a net consisting of three telegraph keys.

Standard of receiving and transmitting messages:

Excellent — 250/175 items per hour

Good — 225/150 items per hour

Fair — 200/125 items per hour

Lesson 12. Radio operations; methods of aiding the establishment of communications between radios in the net; methods of transmitting radio telegrams through intermediate radio stations within the net; methods of confirming the tent of radio telegrams received; control of communications with radios of the adjacent net; maintaining the standards of receiving and transmitting messages prescribed in Lesson 11.

Subject 34. Receiving up to Eleven Items per Minute and Increasing Transmitting Speed and Radio-Telephone Operations within Its Effective Distance

Lesson 1. Methods of increasing the receiving speed for all types of radio telegrams up to eleven items per minute; transmitting all types of radio telegrams at the speed of ten items per minute; practice in alternating between receiving and transmitting (up to 200 items).

Lesson 2. Radio operations in communication axis; receiving radio work assignments; communication control; shifting from one frequency to another, receiving and transmitting all types of radio telegraphic messages and operations without call signs.

Lesson 3. Receiving all types of radio telegrams at the speed of eleven items per minute when interference is normal and signal strength is weak; increasing transmitting speed to eleven items per minute.

Lesson 4. Receiving all types of radio telegrams at the speed of eleven items per minute when interference is strong; transmitting radio telegrams at the speed of eleven items per minute; methods of transmitting dictated messages; procedures for changing radio data.

Lesson 5. Radio operations; receiving and transmitting multiple radio telegrams; methods of transferring the functions of the main radio to another radio in the net; receiving and transmitting radio telephone messages by the PUDAE.

Lesson 6. Receiving messages under various degrees of signal strength when interference exist and transmitting all types of radio telegrams at the speed of eleven items per minute; receiving radio telegram having number codes.

Lesson 7. Two-way exchange of messages and receiving and transmitting messages within the net.

Standard of receiving and transmitting:

Excellent — 325/250 items per hour

Good — 275/200 items per hour

Fair — 225/150 items

Lesson 8. Radio operations; receiving and transmitting all types of radio telegrams at the speed designated in Lesson 7; receiving and transmitting radio signals and relaying radio telegrams.

Lesson 9. Receiving when interference exist and determination of the standard of transmitting all types of radio telegrams at the speed of eleven items per minute.

Standard:

Excellent — no mistake in spelling in one hundred item telegram

Good — one mistake in spelling

Fair — two mistakes in spelling.

Subject 35. Operations by the Communication KUBUNDAE to Ensure Communications for the PUDAE (KUBUNDAE) during Offense

This subject is the same as Subject 42 of the telephone men training.

Subject 36. Operations by the Communication KUBUNDAE to Ensure Communication for the PUDAE (KUBUNDAE) during Defense

This subject is the same as Subject 43 of the telephone men training.

V. Chemical Defense KUBUNDAE

Purpose of training:

1. To train the personnel (crew) to be proficient in the operation of vehicles and equipment.

2. To improve the soldiers' knowledge and skill obtained during the winter training period.

Subjects and Allocation of Time

Subject Number	Title	Hours	For Chemical Platoons (Companies) by Specialty																	
			For the Chemical Squad			Recon-naissance Troops			Decontamination Troops											
									Weapons and Combat Technical Equipment			Clothing and Equipment			Ground Surface				
			Phases																	
			1	2	3	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3
31	Toxic Agents Used by Foreign Troops	12	-	-	-	12	-	-	12	-	-	12	-	-	12	-	-			
	Chemical Equipment	24	-	5	14	-	-	-	14	-	-	14	-	-	14	-	-			
32	Equipment for Chemical Reconnaissance and Meteorological Observation	18	6	6	15	-	-	10	-	-	10	-	-	10	-	-	10			
33	Mission of Decontamination Teams Using Decontamination Agents and Solvents	9	5	12	8	-	5	16	-	5	16	-	5	16	-	-	5			
34	Vehicles and Equipment for Decontaminating Weapons and Combat Technical Equipment	-	-	-	-	-	-	13	-	-	13	-	-	13	-	-	-			
35	Vehicles and Equipment for Decontaminating the Clothing and Equipment	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-			
36																				

Subjects and Allocation of Time (Cont'd)

Subject Number	Title	Hours																	
		For Chemical Platoons (Companies) by Specialty																	
		For the Chemical Squad			Reconnaissance Troops			Decontamination Troops											
								Weapons and Combat Technical Equipment			Clothing and Equipment			Ground Surface					
		Phases																	
		1	2	3	1	2	3	1	2	3	1	2	3	1	2	3			
37	Vehicles and Equipment for Decontaminating Areas	-	-	6	6	-	-	-	-	-	-	-	-	-	-	-			
38	Laying Smoke Screens		8	-	-	-	10	-	-	10	-	-	10	-	-	10			
	Total		71	11	29	55	-	25	55	-	25	55	-	25	55	-	25		

Subject 31. Toxic Agents Used by Foreign Troops

Lesson 1 and 2. These two lessons will be based on Lessons 3 and 4 of Subject 1 of the winter training period.

Lesson 3. Methods of marking areas and surface objects contaminated by persistent toxic agents on the chemical training ground.

Lesson 4. Practice in distinguishing toxic agents by external signs.

Lesson 5. Examination of the soldiers knowledge of toxic agents and their use.

Subject 32. Chemical Equipment

Lesson 1. Methods of utilizing gas masks exposed to contaminated air; methods of reconditioning gas masks exposed to contaminated air.

Lesson 2. Methods of utilizing individual gas packs for decontamination of personnel and clothing.

Lesson 3. Utilization of protective clothes.

Lesson 4. Repair of chemical equipment by a PUDAE.

Subject 33. Equipment for Chemical Reconnaissance and Meteorological Observation

Lesson 1, 2, 3, 4, 5, and 6. Use of equipment for chemical reconnaissance and meteorological observation; the lessons will be conducted on the basis of Lessons 3, 4, 5, 6, 9 and 10 of Subject 17 of the winter training period.

Subject 34. Missions of Decontamination Teams Using Decontamination Agents and Solvents

Lesson 1. Regulations on the utilization of machine gun, mortar and gun decontamination teams; methods utilizing equipment to decontaminate weapons and combat technical equipment.

Lesson 2, 3, and 4. These lessons will be conducted on the basis of Lessons 3 and 5 of Subject 18 of the winter training period.

Subject 35. Vehicles and Equipment for Decontaminating Weapons and Combat Technical Equipment

Lessons 1, 2, 3, 4, and 5. These lessons will be conducted on the basis of Lessons 4, 5, 6, 7, 8 and 9 of Subject 19 of the winter training period.

Subject 36. Vehicles and Equipment for Decontaminating Clothing and Equipment

Lessons 1, 2, 3, 4, and 5. These lessons will be conducted on the basis of Lessons 3, 4, 5, 6, 7, 8, 9 and 13 of Subject 20 of the winter training period.

Subject 37. Vehicles and Equipment for Decontaminating Areas

Lessons 1, 2, 3, and 4. These lessons will be conducted on basis of Lessons 3, 4 and 7 of Subject 21 of the winter training period.

Subject 38. Laying Smoke Screen

Lesson 1. Selection and establishment of the limits for laying smoke screen; selection and preparation of site for smoke generation; transportation and preparation of smoke generators; methods of generating smoke screen with smoke generators; control over the sites of smoke generators during laying of smoke screen; consumption standards of smoke generators.

Lesson 2. Laying smoke screen.

Special Tactical Training

Purpose of training:

1. To train platoons (companies) in skilfull preparation of decontamination centers to ensure deployment and the mission of PUDAE in the combat formation.

2. To train PUDAE (personnel and crew) in decontamination and chemical reconnaissance.

Subjects and Allocation of Time

Subject Number	Title	Hours																	
		For the Chemical Squad			For Chemical Platoons (Companies) by Specialty														
					Reconnaissance Troops			Decontamination Troops											
								Weapons and Combat Technical Equipment			Clothing and Equipment			Ground Surface				
		Phases																	
		1	2	3	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3
39	Chemical Reconnaissance	25	5	-	25	5	-	25	5	-	25	5	-	25	5	-	25	5	-
40	Platoon Actions and Activities at the Decontamination Center during Deployment of Decontamination Center at Night	-	-	-	20	8	-	20	8	-	20	8	-	20	8	-			
41	Chemical Platoon (Squad) in Marches during Day and at Night	-	15	-	-	16	-	-	16	-	-	16	-	-	16	-			
42	Chemical Platoon (Squad) in Offense	-	10	12	-	24	16	-	24	16	-	24	16	-	24	16			
43	Chemical Platoon (Squad) in Defense	-	10	12	20	-	12	20	-	12	20	-	12	20	-	12			
44	Chemical Company (Platoon) in Marches	-	-	-	-	14	-	-	14	-	-	14	-	-	14	-			
45	Chemical Company in Offense	-	-	-	-	20	-	-	20	-	-	20	-	-	20	-			

Subjects and Allocation of Time (Cont'd)

Subject Number	Title	Hours											
		For the Chemical Squad			For Chemical Platoons (Companies) by Specialty								
					Recon-naissance Troops			Decontamination Troops					
								Weapons and Combat Technical Equipment			Clothing and Equipment		
		Phases											
		1	2	3	1	2	3	1	2	3	1	2	3
46	Chemical Company (Platoon) in Defense	-	-	-	-	16	-	-	16	-	-	16	-
	Participation in General Arms Tactical Training:												
	On Subjects 24 and 25	24	-	-	-	-	-	-	-	-	-	-	-
	On Subjects 27 and 28	-	52	-	-	-	-	-	-	-	-	-	-
	On Subjects 29, 30 and 31	-	-	84	-	-	84	-	-	84	-	-	84
	Total	49	92	108	65	109	112	65	109	112	65	109	112

Subject 39. Chemical Reconnaissance

Lesson 1, 2, 3, 4, and 5. These lessons will be conducted on basis of Lessons 4, 5, 6, 8, 10 and 13 of Subject 25 of the winter training period.

Lesson 6. Detecting enemy chemical fougasse by enternal appearance; determination and marking chemical fougasse fields and detours.

Lesson 7. Establishment and marking of passages through chemical fougasse field; security duties through the passages.

Lesson 8. Lessons 6 and 7 will be repeated at night.

Lesson 9. Reconnaissance of the sector of decontamination center, approaches, advance routes, and the operations area; drawing sketches of the sector showing the decontamination center and contaminated areas.

Lesson 10. Lesson 9 repeated at night.

Subject 40. Platoon Actions and Activities at the Decontamination Center during Deployment of Decontamination Center at Night

This subject will be based on Subject 29 of the winter training period.

Subject 41. Chemical Platoon (Squad) in Marches during Day and at Night

Establishment of duties for chemical observation during march and for reconnaissance; mission of a chemical patrol unit during march; actions to be taken against enemy aerial chemical attack; decontamination after enemy chemical attack during march; actions to be taken when a contaminated area is discovered.

Chemical platoon will be given supplementary training in methods of deploying the decontamination center.

Subject 42. Chemical Platoon (Squad) in Offense

This subject is the same as Lesson 16 of Subject 25 of the winter training period.

The chemical platoon will be given supplementary training in deployment of decontamination center, organization of decontamination activities in the staying area and during offense, and communications with the KUBUNDAE on duty.

Subject 43. Chemical Platoon (Squad) in Defense

This subject is the same as Lesson 17 of Subject 25 of the winter training period.

The chemical platoon will be given supplementary training in deployment of decontamination center, organization of decontamination activities and communications with the KUBUNDAE on duty.

Subject 44. Chemical Company (Platoon) in Marches

Preparation for march; inspection of preparation for company (platoon) march; establishment of duties for all platoon leaders (squad leaders); march order for column; organization of reconnaissance and observation in a column; platoon command during march; actions to be taken during a brief break; air warning signals and chemical warning signals and actions to be taken during enemy ground attack.

Subject 45. Chemical Company (Platoon) in Offense

Lesson 1. (Tactical formation lesson) Disposition in the staging area; establishment of duties for all platoon leaders (squad leaders); inspection of preparation for operation of vehicles and equipment; chemical reconnaissance; methods of company (platoon) advance behind an attacking unit prepared to decontaminate field and road and to deploy decontamination center.

Lesson 2. (Tactical formation lesson) Deployment of decontamination center; replacement of the decontamination center; organization of observation posts and guards; company (platoon) command; decontamination of equipment after use; concentration of a company (platoon) at an assembly point.

Lesson 3. (Tactical training) These lessons will be conducted on the basis of Lessons 1 and 2.

Subject 46. Chemical Company (Platoon) in Defense

Understanding the mission, determination of the situation and making decisions; issuing initial instructions to platoon leaders (squad leaders); preparation of vehicle for combat; field reconnaissance in decontamination area (road) and in the sector for deploying the decontamination center; coordination of action; decontamination; company (platoon) command; mission of the company (platoon) during enemy attack; concentration of a company (platoon) at an assembly point.

VI. Security KUBUNDAE

Purpose of training:

1. To train a platoon in the duties of guarding and defending the command post.

2. To improve the soldiers' skill in establishing, guarding and defending command posts, and controlling traffic.

Subjects and Allocation of Time

Subject Number	Title	Hours		
		First Phase	Second Phase	Third Phase
3	Establishing, Guarding and Defending Command Posts	-	10	-
4	Duties of the Traffic Control Troops	-	4	-
5	Traffic Control Duties of a Squad	-	4	-
6	Missions of Security Platoon in Guarding and Defending Command Posts	-	-	12
	Participation in Command Staff Meneuver	32	-	-

Subjects and Allocation of Time (Cc 'd)

Subject Number	Title	Hours		
		First Phase	Second Phase	Third Phase
	Participation in General Arms Tactical Maneuver on Subjects 29, 30 and 31	-	-	84
	Total	32	18	96

Subject 3. Establishing, Guarding and Defending Command Posts

Lessons 1 and 2. These lessons will be conducted on basis of Lessons 1 and 2 of Subject 1 of the winter training period to suit the summer conditions.

Lesson 3. Reconnaissance duties; patrol duties; study of the reconnaissance area; traffic signs and passwords; reconnaissance of assigned areas; interrogation of passers-by; actions to be taken when the enemy is detected; escorting detainees.

Subject 4. Duties of the Traffic Control Troops

Lesson 1. Duties of the traffic control troops at a sentry post in the area of the command post; telephone procedure to the command post; observation of camouflage.

Lesson 2. Special duties of the traffic control troops at crossroads, railway crossings, vehicle concentrations when the column is halted, assembly points and entrances to shelters; duties of traffic control troops at a sentry post located at a narrow passage and when the road is blocked; priority for passing the columns which converge; sentry post defense.

Subject 5. Traffic Control Duties of a Squad

Lesson 1. Reconnaissance of the area along the route; determination of the detour for personnel, detour for vehicles, locations of fixed sentry post, locations of the roving sentry posts and sign post; making sketches of the march routes; disposition of sentry posts and guides.

Subject 6. Mission of Security Platoon in Guarding and Defending Command Posts

Lesson 1. Guarding command posts; selection of sites and establishment of sentry posts to guard and defend command posts and equipment from enemy ground and air attacks; camouflaging equipment at the command post; fire plan; establishment of barriers; guarding equipment at the command post; reconnaissance; organization of communication at the command post.

Lesson 2. Repulsing enemy attacks against command post; warning signal procedure; occupation of position in the threatened direction; repulsing enemy ground and an attacks; reverting to guard and defense duties at the command post after repulsing enemy attack; transfer of command post to a new area and guarding the staff officers en route; duties when attacked by the enemy during transfer of command post.

VII. Training of Sniper

Note: The subjects and lessons on organization, physical training manual and military topography will be assigned by the training officer.

Tactical Training

Purpose of training:

To give tactical training to snipers under summer conditions.

Subjects and Allocation of Time

Subject Number	Title	Hours
4	Missions of Sniper-Observers in Combat	10
5	Missions of Sniper-Observers in Offense	12
6	Missions of Sniper-Observers in Defense	16
	Total	38

Subject 4. Missions of Sniper-Observers

Lesson 1. Selection establishment and camouflage of observer positions in all types of terrain (in the field, forest, residential area or ground surfaces cut in various ways).

Lesson 2. Methods for snipers to advance undetected to observer positions set up in advance; disposition and camouflage of snipers; observation of enemy situation and terrain; detection and reporting.

Lesson 3. Snipers' observation mission at night.

Subject 5. Missions of Sniper-Observers in Offense

Lesson 1 and 2. The contents are the same as Lessons 1 and 2 of Subject 2 of snipers' winter training.

Lesson 3. Mission of snipers in the forest; duties; selection, establishment, and camouflage of observer positions and fire positions on the line of departure, study of enemy disposition terrain and approaches; search evaluation, and destruction of targets; target designation to weapons; anninilation of targets blocking the advance of an infantry KUBUNDAE; advance to the enemy retreat route and disposition behind tree trunks, shrubs, and other objects; annihilation of the enemy.

Lesson 4. Missions of snipers in residential areas; duties; secret disposition of snipers on the line of departure; search and annihilation of targets at the entrances of a residential areas; advance in the KUBUNDAE combat order and annihilation of targets blocking its advance; methods of penetrating enemy rear areas and annihilating important targets by ambush; annihilation of retreating enemy.

Subject 6. Missions of Sniper-Observers in Defense

Lesson 1 and 2. The contents are the same as Lessons 1 and 2 of Subject 3 of snipers' winter training.

Lesson 3. Missions of snipers in forests; duties; selection establishment, and camouflage of snipers' sentry posts; study of the approaches; organization of fire plan; selection, evaluation and annihilation of targets; designation of targets to the weapons.

Lesson 4. Missions of snipers in residential areas; duties; observation from buildings and selection, establishment and camouflage of fire positions; study of approaches; selection, evaluation and annihilation of the important targets; designation of targets to weapons.

Firing Training

Purpose of training:

To improve the snipers' skill in conducting accurate and prompt fire with a sniper's rifle against all types of targets.

Subjects and Allocation of Time

Subject Number	Title	Hours
4	Conducting Sniper Fire against Disappearing and Camouflaged Targets	80
5	Sniper Fire against Independent Moving Targets and Collective Targets	76
6	Sniper Fire under Limited Visibility	28
	Total	184

Subject 4. Sniper Fire against Disappearing and Camouflaged Targets — 80 hours

Section 1. Organization of the sniper fire — 6 hours.

Lesson 1. Methods of adjusting sniper rifle with optical rear sight to normal firing; adjustment of optical rear sight.

Lesson 2. Troubles of sniper's rifle and optical rear sight, which reduce the effectiveness; inspection of sniper's rifle and optical rear sight.

Lesson 3. Trouble-shooting during sniper fire.

Section 2. General principles of infantry weapon marksmanship — 10 hours.

Lesson 1. The differances between trajectory and the line of sight at distances between 400-700 meters.

Lesson 2. Probability of hitting various types of targets.

Lesson 3. Determination of beaten zone while performing sniper duties.

Lesson 4. Determination of correction in elevation during fire from a mountain.

Section 3. Methods of firing sniper rifle and firing regulations — 50 hours.

Lesson 1. Determination of windage in firing against small independent targets; determination of wind direction and velocity.

Lesson 2. Determination of temperature; determination of the rear sight correction for temperature; determination of the aiming point.

Lesson 3. Determination of windage for firing against large independent target; determination of the rear sight correction and aiming point.

Lesson 4. Firing from various positions from shelters at disappearing targets.

Lesson 5. Firing from standing and kneeling positions in trenches at disappearing targets.

Lesson 6. Methods of fire at transient targets.

Lesson 7. Firing at disappearing targets through embrasures.

Lesson 8. Methods of firing simultaneously at several disappearing targets and firing regulations; shifting fire between targets located on the front and within the defense in depth.

Lesson 9. Methods of firing at independent targets located behind small masks and firing regulations.

Lesson 10. Methods of firing at targets located behind wide masks and firing regulations.

Lesson 11. Firing at targets utilizing supplementary aiming stakes.

Lesson 12. Firing practice.

Section 4. Hand grenade throwing — 6 hours.

Lesson 1. Methods of throwing hand grenades from prone position behind trenches and various shelters.

Lesson 2. Methods of throwing hand grenades accurately and far from standing position, during march and double-time march.

Lesson 3. Methods of throwing hand grenades at the windows and doors of a building from a standing position, during march and double-time march.

Section 5. Observation of front and determination of distances — 8 hours.

Lesson 1. Study of the terrain, memorizing the characteristic and outlines of surface objects.

Lesson 2. Observation of the terrain and surface objects; methods of detecting objects by the changes in the terrain and independent surface objects; making entries in the observation log.

Lesson 3. Methods of determining distances within 600 meters by estimation and using binoculars and optical rear sights.

Lesson 4. Methods of measuring angles in the field by utilizing optical rear sights and other available equipment; determination of distances by measuring angles.

Subject 5. Sniper Fire at Independent Moving Targets and Collective Targets — 76 hours

Section 1. Structure of a sniper rifle — 6 hours.

Lesson 1. Care and handling of a sniper rifle.

Lesson 2. Preventive maintenance and trouble-shooting during fire.

Lesson 3. Disassembly, cleaning and assembly of a sniper rifle and optical rear sight in the field.

Section 2. General principles of infantry weapon marksmanship — 6 hours.

Lesson 1. Difference between height of trajectory and the line of sight during fire at distances of 800-1,000 meters.

Lesson 2. Use of firing charts and regulations on sniper fire.

Section 3. Methods of firing a sniper rifle and firing regulations — 54 hours.

Lesson 1. Solving problems in determining the rear sight adjustment and the lead against independent moving target under all weather conditions.

Lesson 2. Conducting sniper fire at moving targets by continuous tracking from prone, kneeling and standing positions in trenches.

Lesson 3. Methods of preparing sniper fire from behind various concealments at independent moving target from prone, kneeling and standing positions.

Lesson 4. Methods of firing at large and clearly visible collective targets and firing regulations.

Lesson 5. Methods of firing at narrow and clearly visible collective targets and firing regulations.

Lesson 6. Methods of firing at large camouflaged target and firing regulations.

Lesson 7. Windage correction for firing at moving collective targets within a limited time.

Lesson 8. Firing at armored targets.

Lesson 9. Firing practice.

Section 5. Observation of the front and determination of distances — 10 hours

Lesson 1. Study of the terrain of the target area; detection of targets by changes in the terrain and surface objects.

Lesson 2. Search and evaluation of the targets by external appearance; preparation of firing data.

Lesson 3. Observation of the front and detection of targets in isolated areas.

Lesson 4. Determination of distances up to 1,000 meters by estimation and use of binoculars and optical rear sights.

Subject 6. Sniper Fire under Limited Visibility — 28 hours

Section 3. Methods of firing sniper rifle and firing regulations — 22 hours.

Lesson 1. Loading, mounting rear sight, unloading and preparation of sniper rifle for firing.

Lesson 2. Methods of firing at silhouette targets from various positions at night and firing regulations.

Lesson 3. Methods of preparing sniper rifle for use during the day by utilizing various devices for firing at night.

Lesson 4. Methods of firing sniper rifle during the night at illuminated targets without fire preparation and firing regulation.

Lesson 5. Fire at night on the basis of bearing (direction of sound or light source) without fire preparation.

Lesson 6. Firing practice.

Section 5. Observation of the front and determination of distances — 6 hours.

Lesson 1. Principles of observation at night; selection of site for observation, detection of targets and their locations on basis of sound and light sources.

Lesson 2. Determination of distances to the target silhouette or light and sound sources.

Engineer Training

Purpose of training:

To improve the skill of snipers in camouflage and to train the snipers in establishment of sentry posts in all types of terrain.

Subjects and Allocation of Time

Subject Number	Title	Hours
3	Camouflage of the Snipers and Establishment of Snipers' Sentry Posts	16
	Total	16

Subject 3. Camouflage of Snipers and Establishment of Snipers' Sentry Posts

Lesson 1. Methods of camouflaging snipers with available equipment and prescribed masks when snipers are assigned to undulating field, or among tree stumps and rocks.

Lesson 2. Camouflage of snipers when snipers are assigned to stationary posts or when they advance along the slopes of hills and valleys.

Lesson 3. Methods of camouflaging snipers when they are assigned to stationary posts or when they advance through forest and shrubbery.

Lesson 4. Camouflaging of snipers when they are assigned to stationary posts or when they move through residential areas.

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